AMENDMENT OF SOLICIT	ATION/MODIFI	CATION OF CONTRACT	1. CONTRACT	ID CODE	PAGE OF	PAGES
	ı	1	J	1	1	34
2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO. W16ROE-3255-0713		5. PROJECT	NO.(If applica	ıble)
0003	10-Sep-2004			1		
6. ISSUED BY CODE	W912DS	7. ADMINISTERED BY (If other than item 6)	COl	DE		-
USA ENGINEER DISTRICT, NEW YORK ATTN:CENAN-CT ROOM 1843 26 FEDERAL PLAZA NEW YORK NY 10278		See Item 6				
8. NAME AND ADDRESS OF CONTRACTOR	(No., Street, County,	State and Zip Code)	X 9A. AMENDM W912DS-04-R	IENT OF SO R-0001	LICITATIO	ON NO.
			9B. DATED (S 06-Aug-2004	SEE ITEM 1	1)	
			10A. MOD. OF			NO.
CODE			10B. DATED	(SEE ITEM	13)	
CODE 11 7	FACILITY COL	PPLIES TO AMENDMENTS OF SOLIC	TITATIONS			
X The above numbered solicitation is amended as set for			X is extended,	is not exter	nded.	
Offer must acknowledge receipt of this amendment p		=				
(a) By completing Items 8 and 15, and returning 1 or (c) By separate letter or telegram which includes a RECEIVED AT THE PLACE DESIGNATED FOR T REJECTION OF YOUR OFFER. If by virtue of this a provided each telegram or letter makes reference to the	copies of the amendme reference to the solicitatio HE RECEIPT OF OFFER mendment you desire to ch	nt; (b) By acknowledging receipt of this amendmenn and amendment numbers. FAILURE OF YOU SPRIOR TO THE HOUR AND DATE SPECIFII ange an offer already submitted, such change may	ent on each copy of the R ACKNOWLEDGME ED MAY RESULT IN be made by telegram o	offer submitted ENT TO BE	l;	
12. ACCOUNTING AND APPROPRIATION D	ATA (If required)					
		O MODIFICATIONS OF CONTRACTS T/ORDER NO. AS DESCRIBED IN ITE				
A. THIS CHANGE ORDER IS ISSUED PUR CONTRACT ORDER NO. IN ITEM 10A.	SUANT TO: (Specify			RE MADE IN	N THE	
B. THE ABOVE NUMBERED CONTRACT/ office, appropriation date, etc.) SET FOR	TH IN ITEM 14, PU	RSUANT TO THE AUTHORITY OF F		ch as change	es in paying	
C. THIS SUPPLEMENTAL AGREEMENT	S ENTERED INTO F	URSUANT TO AUTHORITY OF:				
D. OTHER (Specify type of modification and	d authority)					
E. IMPORTANT: Contractor is not,			copies to the issuin			
14. DESCRIPTION OF AMENDMENT/MODIF where feasible.) The purpose of this amendment is to:	ICATION (Organized	d by UCF section headings, including so	licitation/contract	subject matte	er	
<ol> <li>To incorporate questions and answers. A</li> <li>To incorporate changes to the specification</li> <li>To incorporate a revised bid schedule.</li> <li>The cut-off date for questions is 15 Sept 2</li> </ol>	ons and drawings	, , ,				
The proposal due date remains unchanged, 2	0 Sept 2004 at 2:00p	m local time.				
All other terms and conditions remain unchar	nged as a result of thi	s amendment.				
Except as provided herein, all terms and conditions of the d						
15A. NAME AND TITLE OF SIGNER (Type of	or print)	16A. NAME AND TITLE OF CO	NTRACTING OFF	FICER (Type	e or print)	
A.D. GOVERN AGE	T : :: -:	TEL:	EMAIL:	Τ.	<b>.</b>	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNE	D 16B. UNITED STATES OF AMER	RICA	160	C. DATE SI	GNED
(Signature of manager and arrival to a construction of manager and a construction of the construction of t		Signature of Contracting Of	Fi a a w)	10	0-Sep-2004	ţ
(Signature of person authorized to sign)		(Signature of Contracting Of	icer)			

#### SECTION SF 30 BLOCK 14 CONTINUATION PAGE

#### **SUMMARY OF CHANGES**

SECTION SF 30 - BLOCK 14 CONTINUATION PAGE

The following have been added by full text:

#### AMENDMENT 3

NOTE: Bidders must acknowledge receipt of this amendment by the date specified in the solicitation (or as amended) by one of the following methods: In the space provided on the SF 1442, by separate letter, or by telegram, or by signing the block 15 below. FAILURE TO ACKNOWLEDGE AMENDMENTS BY THE DATE AND TIME SPECIFIED MAY RESULT IN REJECTION OF YOUR BID IN ACCORDANCE WITH THE LATE BID, LATE MODIFICATIONS OF BIDS OR LATE WITHDRAWAL OF BIDS (FAR 14.304)

The following changes shall be made to the drawings and specifications.

#### **DRAWINGS**

The following drawings have been **REVISED** and **REISSUED**. Changes to the drawings are labeled "BID AMENDMENT #2" and should read "BID AMENDMENT #3".

```
T100.2
       COVER SHEET, VOLUME 2
T101.2
       MAPS & DRAWING LISTS, VOLUME 2
FP101
       FIRE PROTECTION - BASEMENT PLAN
FP101
       FIRE PROTECTION - FIRST FLOOR PLAN
       FIRE PROTECTION - SECOND FLOOR PLAN
FP102
FP103
       FIRE PROTECTION - THIRD FLOOR PLAN
FP104
       FIRE PROTECTION - FOURTH FLOOR PLAN
FP105
       FIRE PROTECTION - FIFTH FLOOR PLAN
FP106
       FIRE PROTECTION - SIXTH FLOOR PLAN
M100
       HVAC-BASEMENT PLAN - DUCTWORK
T100.3 COVER SHEET, VOLUME 3
T101.3
       MAPS & DRAWING LISTS, VOLUME 3
E202
       ELECTRICAL - SECOND FLOOR RECEPTACLES PLAN
E301
       ELECTRICAL - FIRST FLOOR LIGHTING PLAN
E305
       ELECTRICAL - FIFTH FLOOR LIGHTING PLAN
T100.4 COVER SHEET, VOLUME 4
T101.4 MAPS & DRAWING LISTS, VOLUME 4
ASB1-AR BASEMENT ASBESTOS ABATEMENT
ASB2-AR FIRST FLOOR ASBESTOS ABATEMENT
LBP1-AR BASEMENT LEAD BASED PAINT ABATEMENT
LBP2-AR FIRST FLOOR LEAD BASED PAINT ABATEMENT
A101-AR FIRST FLOOR CONSTRUCTION PLAN
A401-AR FIRST FLOOR REFLECTED CEILING PLAN
A101-AR FIRST FLOOR CONSTRUCTION PLAN
A401-AR FIRST FLOOR REFLECTED CEILING PLAN
A601-AR INTERIOR ELEVATIONS
X-A849 MARGIN OF EXCELLENCE, TERRACE DETAILS, MoE ITEM WT1
```

# The following drawings have been **DELETED**:

E720 ELECTRICAL DETAILS - 20 E721 ELECTRICAL DETAILS - 21 E704-AR ELECTRICAL DETAILS - 4

### **SPECIFICATIONS**

The following specifications have been **REVISED** as stated:

### Section 01030 Options

Revise paragraph heading 3.1.4 Bid Option No. 4 as follows: DELETE PARAGRAPH.

Revise paragraph heading 3.1.12 Bid Option No. 12 as follows: DELETE PARAGRAPH.

## Section 01355 Environmental Protection

Revise paragraph heading **3.6.3.1 Exposed Surface Area** to read as follows:

Paragraph heading should read: "3.6.3.1 Hazardous Waste Manifests."

## Section 01575 Temporary Environmental Controls

Revise paragraph heading 3.5.1.4.(a) Responsibilities for Contractor's Disposal as follows:

In the second paragraph of sub-paragraph a., eliminate the following: "Include the following USMA requirements in this section:"

## Section 02222 Rock Excavation

Add paragraph heading **3.5 Subsurface Data** to read as follows:

### "Refer to Appendix A."

Appendix A is attached at the end of this document.

#### Section 02930 Exterior Planting (Bid Option No. 18)

Revise paragraph heading **2.6.1 Bracing Stakes** as follows:

Replace the words "57mm diameter dowels" with "50 mm square or 64mm in diameter".

Revise paragraph heading 2.6.2 Ground Stakes as follows:

Replace the words "57mm diameter dowels" with "50 mm square or 64mm in diameter".

## Section 04851 Dimension Stone Cladding

Revise the following paragraph **2.2.2 Limestone** to read as follows:

"References to "limestone" in drawings and specifications actually refer to sandstone.
"Limestone" (actually sandstone) shall be equal to "Pleasant Hill Buff" sandstone as fabricated and quarried by Briar Hill Stone Company, or approved sandstone equal, complying with ASTM C616. True limestone will not be excepted."

#### Section 05700 Ornamental Metals

Revise paragraph heading 2.1.2 Steel Frame Fascia to read as follows:

"Cast Bronze Fascia and Bronze Plate Countertop, both with red-brown patina and SH #4 clear coat, semi-gloss finish.

Basis for Design: Polich Art Works

453 Route 17K

Rock Tavern, NY 12575

845 567 9464"

## Section 08710 Door Hardware

Appendix A is attached at the end of this document.

#### Section 08810 Glass and Glazing

Revise paragraph heading 3.5 Glass Schedule to add the following:

"Glass Type	Thickness	Outer Lite	Inner Lite
9	9.53mm	clear tempered clear tempered	
10	12.7mm		"

#### Section 09680 Carpet

Revise the following paragraph **3.4.1 Broadloom Installation** to read as follows:

"Broadloom carpet shall be installed with double-stick rubber padding (by Tred-Mor, tel. 800-435-4062 or approved equal), and shall be smooth, uniform, and secure, with a minimum of seams."

# Section 13202 Fuel Storage Systems

Replace paragraph heading 2.5 Aboveground Storage Tank in its entirety with the following:

## 2.5 "Aboveground Storage Tank

#### 2.5.1 General

All tanks shall be double walled. All welds shall be continuous. The primary tank and the secondary containment tank shall have passed a proof of design hydrostatic pressure test of 25 psi.

### 2.5.2 Primary Tank

The tank shall be UL 142 listed and meet fire code requirements, including NFPA 30, for flammable and combustible liquid storage. The tank shall be equipped with a minimum of (2) lifting lugs, (7) threaded PVC plugs in fittings, and 28 liter spill boxes. It shall have feet to keep it elevated from the surface upon which it is mounted. The outside of the tank shall be coated with an industrial grade maintenance-free weatherproof epoxy coating. If a ladder is required for refueling, such ladder shall be equipped with welded steps. Tank is to be labeled with design capacity, working capacity, and tank number.

### 2.5.3 Secondary Containment Tank

The secondary containment tank shall be UL142 listed as secondary containment. It shall be rectangular and provide a minimum of 110% secondary capacity. It shall be equipped with (5) NPT openings, and (2) additional NPT openings, one for monitoring the interstitial space and one for an emergency vent.

#### 2.5.4 Fill Ports

Tank fill ports are to be color coded by fuel type as follows:

Higher gasoline Red
 Middle gasoline Blue
 Lower gasoline White

Higher unleaded gasoline Red w/ white cross
Middle unleaded gasoline Blue w/ white cross

Lower unleaded gasoline White w/ black cross

Vapor recovery OrangeDiesel Yellow

• #1 fuel oil Purple w/ yellow bar

#2 fuel oil GreenKerosene Brown

Symbols to be used are as follows:

Circle Gasoline products / Vapor recovery

Hexagon Other distillates

A border shall be painted around symbols representing fuel products containing extenders such as alcohol. The border will be black around a white symbol and white around any other color."

### Section 13930 Wet Pipe Sprinkler System, Fire Protection

Revise first sentence of paragraph heading 1.2.1.1 Basis for Calculations to read as follows:

"..a static pressure of 413.9 kPA, and a flow rate of 4391.08 LPM at a residual pressure of 344.74 kPA."

#### Section 13935 Dry Pipe Sprinkler System, Fire Protection

Revise first sentence of paragraph heading 1.2.1.2 Basis for Calculations to read as follows:

"..a static pressure of 413.9 kPA, and a flow rate of 4391.08 LPM at a residual pressure of 344.74 kPA."

## Section 15951 Direct Digital Control for HVAC

Revise Para 2.13 DDC Hardware to read

" .....portable workstation/tester **AND** the central workstation/tester to network control panels....."

#### Revise Para 1.2.9 Contract:

Replace references to DDC panel with "JACE" Controllers.

Also, add "The existing Williams panels to be reconnected will be upgraded from WEC part #3216 to WEC part #3318."

## Delete Para 2.13.3 Universal Programmable Controller (UPC) in its entirety and replace with:

"All HVAC equipment, other than central chillers, shall utilize Honeywell XL-15C Controllers or an equivalent that is compatible to the TRIDIUM based BAS and provides 100% of the functions of the XL-15C to include reprogramming from a central location. Controllers shall utilize Honeywell "Work Place Pro" utilities software."

Remove Para 2.13.1.2 (b) in its entirety.

#### Add the following to Para 2.13.5.1 Chiller Interface to Building Management System

"Manufacturer's chiller panels shall have a connector port for remote functional control and monitoring of chiller system. The panel shall be compatible with accepting an input from the base wide BAS utilizing JACE controllers and TRIDIUM front end. Panels shall be compatible with Honeywell Work Place Pro Utility software."

#### Section 16510 Architectural Lighting

Add paragraph heading 3.6 Architectural Lighting Fixture Schedule to read as follows:

### "Refer to Appendix A."

Replace Appendix A with revised appendix, attached at the end of this document.

# Section 16711 Telephone System, Outside Plant

Revise paragraph heading 3.1.11 Optical Fiber OSP Backbone Cables to read as follows:

"Provide single-mode and multi-mode optical fiber cables from the server room via underground conduits to existing manhole #23A as shown on Telecommunications

drawings. Terminate the cables with ST or FC/APC connectors as appropriate and mount into optical fiber patch panels at each end."

Section 16510 Architectural Lighting, Appendix "A" - Addendum 3

Replace Addendum 3 with **REVISED** description for fixture F20, attached at the end of this document.

# BIDDER'S QUESTIONS AND GOVERNMENT REPLY

Attached, for information only are the questions submitted by various prospective offerors and the respective answers:

1. Geotechnical section dwg. G-001 refers to logs of borings and results of Auger probes as an Appendix of Spec's Section 0222. We have not found any Appendix or even notes regarding this matter, please clarify

ANS: Boring logs will be supplied as part of Amendment #3.

2. Structrual dwgs. S-500 thru S-503 are shown 51 mm thk. "mud" underneath of bottom of concrete foundation. Please provide us with information regarding this "mud" application(materials, properties, etc., is it "lean concrete"?

ANS: "Mud" underneath foundation on \$500-03 is lean concrete.

3. Base Bid Item No 0002 required to provide a price of some quantity of rock excavation, shall we consider this quantity as a difference between estimated by Contractor and Engineer mass and trench (including 10% of contingency – Items 0002AA thru 0002AD) rock excavation volume (CM), please, clarify.

ANS: CLIN's 2AA and 2AC are the estimated quantities of mass and trench rock. CLIN's 2AB and 2AD are the estimated additional rock. Price these quantities. These are the estimated quantities based on the subsurface data as per plans and specifications.

4. Asbestos and lead drawings indicate that the Contractor is responsible to field verify locations indicated on the drawings. We are not in a position to lab test the entire building prior to Bid, and How does this note correlate with the Bid form quantities?, please, clarify.

ANS: Lab testing is not required. You are required to abate the estimated quantity as per plans and specifications. If additional quantity is abated during the contract then you will be required to notify the COR.

5. The given quantities of LBR and ACM on the Bid form differ drastically from the quantities indicated on the drawings. Will the Bid form be changed to reflect the differences?, please, clarify

ANS: See revised price schedule for estimated quantities.

6. Item 0005 of the Bid from refers to drawing ASB-1-AR. What about drawing ASB-2-AR?, please, clarify.

ANS: See revised price schedule.

7. All of the drawings are in metric measurement. All pipe, ductwork, etc is listed in MM. This includes all the mechanical schedules showing pumps, equipment, etc. This will limit vendor quotes we receive as lots of vendors will not make the effort to do conversions. All of our vendors are asking if new drawings will be out? This is a big job to get taken off, please advise.

ANS: Project is designed in metric and will not be reissued in American units.

8. Is the bid date firm or is there the possibility that a bid extension might be forth coming?

ANS: See amendment #3 instructions for revised proposal due date.

9. Our computer estimating program does not have the capability to take off blueprints in METRIC measurements. Being these drawings are issued in METRIC measurements, will new drawings being issued showing scale, sizes, etc. in American measurements and perhaps how to?

ANS: See answer to question 7.

10. If not will the architect/engineer issue an addendum referencing what metric sizes equate to American measurements for pipe, valves & fittings?

ANS: Conversion tables are provided on the drawings.

11. Will pipe, valves & fittings for the plumbing/mechanical systems be required to be supplied in METRIC sizes?

ANS: The project is design in metric. See plans and specifications for equipment sizes.

12. Will submittals be required to be submitted showing metric units of measurements?

ANS: All shop drawing submittals will require metric conversion to indicate compliance with construction documents.

13. Is there a preferred control contractor (Siemens, Johnson, Honeywell, etc.) who is currently providing temperature control services to the site? If so pleas provide a list of contacts complete with phone numbers.

ANS: No, see DDC specification for equipment requirements.

14. Are the drawings separated into 2 different packages, with the ones with the suffix "AR" having to do with the work in the existing building?

ANS: Yes, the AR drawings (VOL 4) pertain to the existing building renovation work.

15. In the request for bid, is there any requirement to breakout the price for work associated with work in the existing building

ANS: See the specifications for detailed information regarding price breakdown.

16. At the pre con meeting, it was mentioned that any questions asked at the meeting would be answered the very next day via amendment. Have they been addressed as of yet? In not when can expect the next amendment? This is a very big project and a substantial amount of time is needed to provide a competitive estimate.

ANS: All outstanding guestions by Contractors are being addressed and issues via amendment.

17. Drawing MD101-AR is showing removal of existing steam radiator (left side of print) Is it just (1) radiator? If not please identify quantity to be removed.

ANS: Question shall be answered in a following amendment.

18. Please consider extending the bid date to allow us to process information issued by the answering of questions regarding RFI's.

ANS: See amendment #3 instructions for revised proposal due date.

19. Will all RFI questions and their answers be incorporated into an addendum, so all bidders can see all questions asked and answered?

ANS: All questions are being addressed.

20. Drawing M101A shows a unit heater designated as UH-1 in vestibule(s) 101 & 103. Please confirm this is the proper heater for this location.

ANS: Question shall be answered in a following amendment.

21. Please provide schedule for AC 4-1 & AC 5-1 as shown on drawing M-107, And provide the location for AC-3 as shown in the equipment schedule. I can not find it on the drawings.

ANS: Schedule is on dwg M903. AC-3 located in Main Telecom Room. See M704 and M100.

22. Please provide schedule/model/size requirements for CP-1 Condensate Pump as shown on drawing M-301 & M-510.

ANS: Schedule is on dwg M904.

23. Please provide size/model/requirements for tank TK-2 as shown on drawing M-514.

ANS: TK-2 is the day tank. See 985-liter Day Tank on M106.

24. Drawing M-603 shows (2) sump pumps SP-1 & SP-2. Please provide schedule/sizing/model for these pumps.

ANS: Question shall be answered in a following amendment.

25. There is a refrigerant leak detection panel shown on drawing M-302. Please provide a schedule/requirements/model for this equipment.

ANS: Refrigerant leak detection is detailed in spec section 15620 Liquid Chillers, paragraph 2.7.1 "Refrigerant Liquid Detector."

26. Drawing M-106 shows a 985 L day tank for emergency generator. I would assume that this tank would be supplied with the generator package and should be included with the electrical package not mechanical?

ANS: The tank is required to be supplied as part of this project.

27. Please advise where we can find "Appendix A" containing the Door Hardware Schedule which is referenced at the end of spec section 08710.

ANS: Appendix A for 08710 is attached to this amendment.

28. We could not find a CLIN in the bid form for bid option numbers 4 and 12. Are we to provide a price for these items?

ANS: The option specification has been revised. HD shelving is not part of this solicitation.

29. Are we to provide a price for CLINS's 0002,0009,0010,0012,0013, and 00014? These CLINs appear to e the sum of their corresponding –AA,-AB, etc. CLIN's however, they do not contain a unit or a line (a space) to enter a price. In addition, there already exists a SUBTotal CLINS space for each of their totals.

ANS: CLIN's 0002, 0009, 0010, 0012, 0013 and 0014 are only general descriptions of work for items to be priced below. Do not provide a price for these CLIN items.

30. We kindly request a one week extension of the bid date.

ANS: See amendment instructions for proposal due date.

31. Please provide the geotechnical boring logs – drawing G-001 references as an appendix to spec section 02222 but it is not on the disk provided.

ANS: Boring logs provided as attachment to this amendment.

32. Where are the location of the soil and rock anchors for specification section 0290? It states that it will be paid via unit price but there is not a unit price established. Please clarify?

ANS: Question shall be answered in a following amendment.

ITEM NO 0001	SUPPLIES/SERVICES	QUANTITY	UNIT Lump Sum	UNIT PRICE	AMOUNT
	FFP All work associated with a accordance with drawing v -0040)				
	PURCHASE REQUEST	NUMBER: W16RC	DE-3255-0713		
				NET AMT	
FOB:	Destination				
ITEM NO 0002	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002	Rock Excavation FFP				
FOB:	Destination				
ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AA		9,318	Cubic Meter		
	Mass Rock FFP				
				NIET AMT	
				NET AMT	

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ITEM NO 0002AB	SUPPLIES/SERVICES	ESTIMATED QUANTITY 932	UNIT Cubic	UNIT PRICE	AMOUNT
	Additional Mass Rock FFP		Meter		
				NET AMT	
FOB:	Destination				
ITEM NO 0002AC	SUPPLIES/SERVICES  Trench Rock FFP	ESTIMATED QUANTITY 2,357	UNIT Cubic Meter	UNIT PRICE	AMOUNT
				NET AMT	
FOB:	Destination				
ITEM NO 0002AD	SUPPLIES/SERVICES	ESTIMATED QUANTITY 236	UNIT Cubic Meter	UNIT PRICE	AMOUNT
	Additional Trench Rock FFP				
				NET AMT	
FOB:	Destination				
SUBT	Total CLINs (0002AA – 00	02AD) \$			

ITEM NO 0003	SUPPLIES/SERVICES	QUANTITY	UNIT Lump Sum	UNIT PRICE	AMOUNT
	FFP All work associated with and the specifications.	construction of the	e Archives in acc	ordance with VOL 4	
				NET AMT	
				NEI AMI	
FOB:	Destination				
ITEM NO 0004	SUPPLIES/SERVICES	ESTIMATED QUANTITY 103	UNIT Square Meter _	UNIT PRICE	AMOUNT
	FFP Lead Base Paint removal : LBP-2-AR.	in Archive in acco	ordance with plans	s LBP-1-AR and	
				NET AMT	
FOB:	Destination				
ITEM NO 0005	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	AMOUNT
	FFP Asbestos Abatement				

ITEM NO 0005AA	SUPPLIES/SERVICES	QUANTITY 956	UNIT Square Meter	UNIT PRICE	AMOUNT
	FFP Asbestos Abatement of flo with ASB-1-AR and ASB			Area in accordance	
				NET AMT	
FOB:	Destination				
Ç	SUBCLIN 0005AB is added	l as follows:			
ITEM NO 0005AB	SUPPLIES/SERVICES	QUANTITY 213	UNIT Linear Meter	UNIT PRICE	AMOUNT
	FFP Asbestos Abatement of w ASB-1-AR and ASB-2-Al		the Archive Ar	rea in accordance with	
				NET AMT	
FOB:	Destination				
SUBT	Γotal CLINs (0005AA-000	5AB) \$			

**AMOUNT** 

0006 Lump Sum OPTION **FFP** All work associated with the addition of the Limestone window surrounds as shown on drawing A845 labeled Option 1, excluding arched windows. May be awarded within 240 calendar days from NTP. **NET AMT** FOB: Destination ITEM NO SUPPLIES/SERVICES **QUANTITY** UNIT UNIT PRICE **AMOUNT** 0007 Lump Sum OPTION **FFP** All work associated with the installation of a complete FM200 fire supression system as shown on F100-AR thru F302-AR labeled Option 10. May be awarded within 240 calendar days from NTP. **NET AMT** FOB: Destination ITEM NO SUPPLIES/SERVICES UNIT UNIT PRICE **AMOUNT QUANTITY** 0008 Lump Sum OPTION **FFP** All work associated with the construction of additional landscaping and irrigation as shown on L4.03, L5.01 and I101A and I102 labeled Option 18. May be awarded within 240 days from NTP. **NET AMT** 

UNIT

UNIT PRICE

ITEM NO

SUPPLIES/SERVICES

FOB: Destination

**QUANTITY** 

ITEM NO 0009 OPTION	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	FFP All work associated with t floors in accordance with t within 240 calendar days f	drawing A-900 la			
FOB:	Destination				
ITEM NO 0009AA OPTION	SUPPLIES/SERVICES	QUANTITY	UNIT Lump Sum	UNIT PRICE	AMOUNT
	FFP First Floor Only.				
				NET AMT	
FOB:	Destination				
ITEM NO 0009AB OPTION	SUPPLIES/SERVICES	QUANTITY	UNIT Lump Sum	UNIT PRICE	AMOUNT
011101	FFP Second thru Fifth Floor Or	nly			
				NET AMT	
FOB:	Destination				
SUBT	Total CLINs (0009AA-0009	PAB) \$		_	

ITEM NO SUPPLIES/SERVICES QUANTITY UNIT UNIT PRICE **AMOUNT** 0010 OPTION **FFP** Construction of Circulation and Reference Desks in the New Library/Learning Center. FOB: Destination SUPPLIES/SERVICES **QUANTITY** UNIT **UNIT PRICE AMOUNT** ITEM NO 0010AA Lump Sum OPTION **FFP** All work associated with construction of the circulation desk and reference desk including canopies as shown on A402, A702 and A870 thru A872 labeled Option 5. (May be awarded within 540 calendar days from NTP) **NET AMT** FOB: Destination SUPPLIES/SERVICES UNIT **UNIT PRICE** ITEM NO **QUANTITY AMOUNT** 0010AB Lump Sum OPTION **FFP** All work associated with the upgrading of the circulation desk and reference desks as shown on X-A102, 870, 871, 872, and 873, labeled RF1 and as specified in Section 05700 Addendum 1. This excludes work associated with CLIN 0010AA. (May be awarded within 540 calendar days from NTP) **NET AMT** FOB: Destination SUBTotal CLINs (0010AA-0010AB) \$\_

SUPPLIES/SERVICES QUANTITY UNIT UNIT PRICE ITEM NO **AMOUNT** 0011 Lump Sum OPTION FFP All work associated with the construction of a reference desk as shown on A701-AR and A821-AR labeled Option 13. (May be awarded within 700 calendar days from NTP) **NET AMT** FOB: Destination ITEM NO SUPPLIES/SERVICES QUANTITY UNIT **UNIT PRICE AMOUNT** 0012 OPTION **FFP** Construction of Display Cases in the First Floor Lobby of the New Library/Learning Center FOB: Destination ITEM NO SUPPLIES/SERVICES **QUANTITY** UNIT UNIT PRICE **AMOUNT** 0012AA Lump Sum OPTION **FFP** All work associated with the construction of display cases (DC01 thru DC03) as shown on A101 labeled Option 7. (May be awarded within 540 calendar days from NTP)

**NET AMT** 

**AMOUNT** 

0012AB Lump Sum OPTION **FFP** All work associated with the upgrading of display cases (DC01 thru DC03) as shown on X-A101, 622, and 876, labeled FL4. This excludes work associated with CLIN 0012AA. (May be awarded within 540 calendar days from NTP) **NET AMT** FOB: Destination SUBTotals CLINs (0012AA-0012AB) \$\_ SUPPLIES/SERVICES **QUANTITY UNIT PRICE AMOUNT** ITEM NO **UNIT** 0013 OPTION **FFP** Construction of Display Cases in the Archives FOB: Destination ITEM NO SUPPLIES/SERVICES **QUANTITY UNIT UNIT PRICE AMOUNT** 0013AA Lump Sum OPTION All work associated with the construction of display cases (DC-01) as shown on A101-AR labeled Option 15. (May be awarded within 700 calendar days from NTP) **NET AMT** 

UNIT

UNIT PRICE

FOB: Destination

ITEM NO

SUPPLIES/SERVICES

**QUANTITY** 

**AMOUNT** 

0013AB Lump Sum OPTION **FFP** All work associated with the upgrading of display cases (DC-01) as shown on X-A101-AR, labeled FL4. This excludes work associated with CLIN 0013AA. (May be awarded within 700 calendar days from NTP) **NET AMT** FOB: Destination SUBTotals CLINs (0013AA-0013AB) \$\_ ITEM NO SUPPLIES/SERVICES **QUANTITY UNIT** UNIT PRICE **AMOUNT** 0014 OPTION **FFP** Construction of Custom Casework in the New Library/Learning Center FOB: Destination ITEM NO SUPPLIES/SERVICES **QUANTITY UNIT** UNIT PRICE **AMOUNT** 0014AA Lump Sum OPTION **FFP** All work associated with installation of custom architectural casework as shown on A102 thru A106, A855, A702 thru A706 and A873 thru A875 labeled Option 9 including rotunda millwork in the central stair, bookcases recessed into granite Rotunda walls on floors 2 thru 5, and display cases in the West Point Room (6th floor). (May be awarded within 540 calendar days from NTP) **NET AMT** 

UNIT

**QUANTITY** 

UNIT PRICE

SUPPLIES/SERVICES

ITEM NO

FOB: Destination

ITEM NO 0014AB OPTION	SUPPLIES/SERVICES	QUANTITY	UNIT Lump Sum	UNIT PRICE	AMOUNT
	FFP All work associated with t A106 and 875, labeled WI (May be awarded within 5	P6. This excludes	work associated		
				NET AMT	
FOB:	Destination				
SUBT	Cotals CLINs (0014AA-001	(4AB) \$			
ITEM NO 0015 OPTION	SUPPLIES/SERVICES	QUANTITY	UNIT Lump Sum	UNIT PRICE	AMOUNT
S. Hell	FFP All work associated with t as shown on A401 thru A4 calendar days from NTP)				
				NET AMT	

**AMOUNT** 

0016 Lump Sum OPTION **FFP** All work associated with the supply and installation of black out shades (all types) as shown on A401-AR labeled Option 11. (May be awarded within 700 calendar days from NTP) **NET AMT** FOB: Destination ITEM NO SUPPLIES/SERVICES **QUANTITY** UNIT UNIT PRICE **AMOUNT** 0017 Lump Sum OPTION **FFP** All work associated with the installation of electrically operated projection screens (all types) as shown on A401 thru A406 labeled Option 6. (May be awarded within 540 calendar days from NTP) **NET AMT** FOB: Destination ITEM NO SUPPLIES/SERVICES UNIT UNIT PRICE **AMOUNT QUANTITY** 0018 Lump Sum OPTION **FFP** All work associated with the installation of electrically operated projection screens (all types) as shown on A401-AR labeled Option 14. (May be awarded within 700 calendar days from NTP) **NET AMT** 

UNIT

UNIT PRICE

FOB: Destination

ITEM NO

SUPPLIES/SERVICES

**QUANTITY** 

QUANTITY UNIT UNIT PRICE ITEM NO SUPPLIES/SERVICES 0019 Lump Sum OPTION **FFP** 

**AMOUNT** 

All work associated with upgrading the carpet types as specified in Section 09680 Addendum 1 and shown on X-A720 thru 725 and X-A721-AR, labeled CR1. (May be awarded within 540 calendar days from NTP)

**NET AMT** 

FOB: Destination

ITEM NO SUPPLIES/SERVICES **QUANTITY** UNIT **UNIT PRICE AMOUNT** 0020 Lump Sum OPTION

**FFP** 

All work associated with upgrading the carpet types as specified in Section 09680 Addendum 2 and shown on X-A722 thru 725, labeled RR1. (May be awarded within 540 calendar days from NTP)

**NET AMT** 

ITEM NO 0021 OPTION SUPPLIES/SERVICES

QUANTITY

UNIT Lump Sum UNIT PRICE

**AMOUNT** 

**FFP** 

All work associated with upgrading the floor finish to a thin-set epoxy terrazzo finish in lieu of a stained concrete finish in the first floor lobby as shown on X-A620, 720, 721, 856, 857, and X-A721-AR, labeled FL2 and as specified in Sections 09445 and 09915 Addendum 4. (May be awarded within 240 calendar days from NTP)

**NET AMT** 

FOB: Destination

ITEM NO 0022 OPTION

SUPPLIES/SERVICES

**QUANTITY** 

UNIT

UNIT PRICE

**AMOUNT** 

Lump Sum

**FFP** 

All work associated with upgrading the floor finish to a thin-set epoxy terrazzo finish in lieu of a stained concrete finish of the center stair as shown on X-A720 thru 726, and 857, labeled MS1 and as specified in Sections 09445 and 09915 Addendum 5. (May be awarded within 240 calendar days from NTP)

NET AMT

ITEM NO 0023 OPTION SUPPLIES/SERVICES

QUANTITY

UNIT Lump Sum UNIT PRICE

**AMOUNT** 

**FFP** 

All work associated with upgrading the floor finish to a thin-set epoxy terrazzo finish in lieu of a stained concrete finish in the circular area adjacent to the central stair and in the corridor of the sixth floor lobby as shown on X-A623, 726, and 857, labeled SL2 and as specified in Sections 09445 and 09915 Addendum 6. (May be awarded within 240 calendar days from NTP)

**NET AMT** 

FOB: Destination

ITEM NO 0024 OPTION

SUPPLIES/SERVICES

**QUANTITY** 

UNIT

UNIT PRICE

**AMOUNT** 

Lump Sum

**FFP** 

All work associated with upgrading the floor finish to a glue-down Brazilian cherry plank floor in lieu of a stained concrete finish of in the area of the sixth floor lobby, outside of a circular area adjacent to the central stair, as shown on X-A623 and 726, labeled SL4 and as specified in Section 09645. (May be awarded within 240 calendar days from NTP)

**NET AMT** 

ITEM NO 0025 OPTION SUPPLIES/SERVICES

QUANTITY

UNIT Lump Sum UNIT PRICE

**AMOUNT** 

FFP

All work associated with upgrading the floor finish to a glue-down Brazilian cherry plank floor in lieu of carpeting in the West Point Room as shown on X-A623 and 726, labeled WP5 and as specified in Section 09645. (May be awarded within 240 calendar days from NTP)

**NET AMT** 

FOB: Destination

ITEM NO 0026

SUPPLIES/SERVICES

QUANTITY

UNIT Lump Sum UNIT PRICE

**AMOUNT** 

OPTION

**FFP** 

All work associated with upgrading the wall finish to a polished plaster finish in lieu of a standard paint finish in the first floor lobby as shown on X-A101 and X-A622, labeled FL1 and as specified in Sections 09215 and 09915 Addendum 2. (May be awarded within 540 calendar days from NTP)

**NET AMT** 

ITEM NO 0027 OPTION

SUPPLIES/SERVICES

QUANTITY

UNIT Lump Sum UNIT PRICE

**AMOUNT** 

**FFP** 

All work associated with upgrading the ceiling finish to a polished plaster finish in lieu of a standard paint finish in first floor lobby and corridors as shown on X-A401, 402, and 621, labeled FL3 and as specified in Sections 09215 and 09915 Addendum 2. (May be awarded within 540 calendar days from NTP)

**NET AMT** 

FOB: Destination

ITEM NO 0028

SUPPLIES/SERVICES

QUANTITY

UNIT Lump Sum UNIT PRICE

**AMOUNT** 

ODZ8 OPTION

**FFP** 

All work associated with upgrading the ceiling finish to a polished plaster finish in lieu of a standard paint finish in sixth floor lobby as shown on X-A406 and 624, labeled SL5 and as specified in Sections 09215 and 09915 Addendum 2. (May be awarded within 540 calendar days from NTP)

**NET AMT** 

ITEM NO SUPPLIES/SERVICES QUANTITY 0029 OPTION

UNIT Lump Sum UNIT PRICE

**AMOUNT** 

**FFP** 

All work associated with upgrading the ceiling finish to a decorative stenciled paint pattern on a plaster finish lieu of a standard paint finish in West Point Room as shown on X-A406, 624, 626, and 858, labeled WP1 and as specified in Section 09915 Addendum 3. (May be awarded within 540 calendar days from NTP)

**NET AMT** 

FOB: Destination

ITEM NO SUPPLIE 0030

SUPPLIES/SERVICES QUANTITY

UNIT Lump Sum UNIT PRICE

**AMOUNT** 

OPTION

**FFP** 

All work associated with upgrading the south wall finish of the sixth floor lobby to wood veneer paneling and the addition of a picture rail as shown on X-A106, 624, and 625, labeled SL1 and as specified in Section 06410 Addendums 1&2. (May be awarded within 540 calendar days from NTP)

**NET AMT** 

**AMOUNT** 

0031 Lump Sum OPTION **FFP** All work associated with upgrading the wall finish of the West Point Room to wood veneer paneling as shown on X-A106 and 625, labeled WP4 and as specified in Section 06410 Addendum 1. (May be awarded within 540 calendar days from NTP) **NET AMT** FOB: Destination ITEM NO SUPPLIES/SERVICES **QUANTITY** UNIT **UNIT PRICE AMOUNT** 0032 Lump Sum OPTION **FFP** All work associated with upgrading the acoustical wall panel fabric as specified in Section 09915 Addendum 1 in the areas as shown on X-A100,101 and 103 thru 105, labeled CR3. (May be awarded within 540 calendar days from NTP) **NET AMT** FOB: Destination **UNIT PRICE** ITEM NO SUPPLIES/SERVICES **QUANTITY UNIT AMOUNT** 0033 Lump Sum OPTION **FFP** All work associated with the upgrading of light fixtures in the rotundas, reading rooms, and archives renovation area in accordance with plans X-A002, 402 thru 405, and X-A401-AR, labeled RR2and as specified in Section 16510 Appendix A, Addendum1 (May be awarded within 540 calendar days from NTP)

**NET AMT** 

UNIT

UNIT PRICE

ITEM NO

SUPPLIES/SERVICES

**QUANTITY** 

FOB: Destination

ITEM NO SUPPLIES/SERVICES QUANTITY UNIT UNIT PRICE AMOUNT 0034 UNIT PRICE Lump Sum

**FFP** 

All work associated with the upgrading of light fixtures in the West Point Room in accordance with plan X-A406, labeled WP2 and as specified in Section 16510 Appendix A, Addendum 2. (May be awarded within 540 calendar days from NTP)

**NET AMT** 

FOB: Destination

ITEM NO SUPPLIES/SERVICES QUANTITY UNIT UNIT PRICE AMOUNT 0035 Lump Sum OPTION

**FFP** 

All work associated with the construction of a level surface of concrete pavers on pedestals, the upgrading the inner wythe of the parapets outside the West Point Room from CMU to granite, and the upgrading of the railings on the sixth floor roof as shown on X-A106, 406,627, and 849, labeled WT1 and as specified in Sections 02775 Addendum 1 and 16510 Appendix A, Addendum 3. (May be awarded within 540 calendar days from NTP)

NET AMT

**AMOUNT** 

0036 Lump Sum OPTION **FFP** All work associated with the construction of granite pavers at the south building entrance in lieu of concrete pavers as shown on L4.01 details 2 and 6A labeled Option 17. (May be awarded within 540 calendar days from NTP) **NET AMT** FOB: Destination ITEM NO SUPPLIES/SERVICES **QUANTITY** UNIT UNIT PRICE **AMOUNT** 0037 Lump Sum OPTION **FFP** All work associated with the construction of granite pavers at the east and west entrances in lieu of concrete pavers as show on X-A002 thru 003, labeled ET1. (May be awarded within 540 calendar days from NTP) **NET AMT** FOB: Destination ITEM NO SUPPLIES/SERVICES UNIT PRICE **AMOUNT QUANTITY UNIT** 0038 Lump Sum OPTION **FFP** All work associated with the construction of stone medallions at the south entry as shown on DRAWINGS X-A101, 201, 209, and 847, labeled ET4. (May be awarded within 240 calendar days from NTP) **NET AMT** 

UNIT

UNIT PRICE

FOB: Destination

ITEM NO

SUPPLIES/SERVICES

**QUANTITY** 

ITEM NO 0039 OPTION	SUPPLIES/SERVICES	QUANTITY	UNIT Lump Sum	UNIT PRICE	AMOUNT
	FFP All work associated with t entries as shown on DRAN ET4. (May be awarded w	WINGS X-A102,	202, 203, 209, 40	02, and 848, labeled	
				NET AMT	
FOB:	Destination				
ITEM NO 0040 OPTION	SUPPLIES/SERVICES FFP	QUANTITY	UNIT Lump Sum	UNIT PRICE	AMOUNT
	All work associated with t detail 1 and 2 labeled Opti NTP)				
				NET AMT	
FOB:	Destination				
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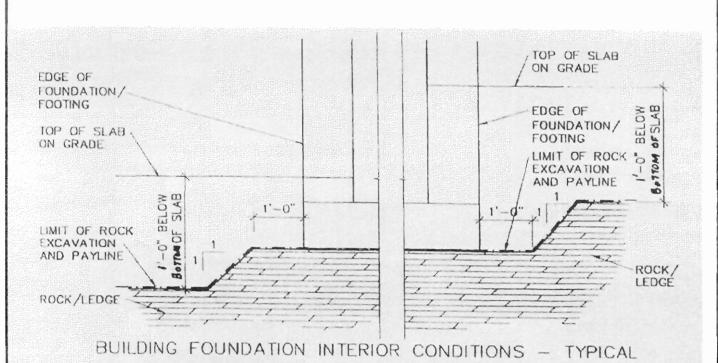
W912DS-04-R-0001 0003 Page 34 of 34

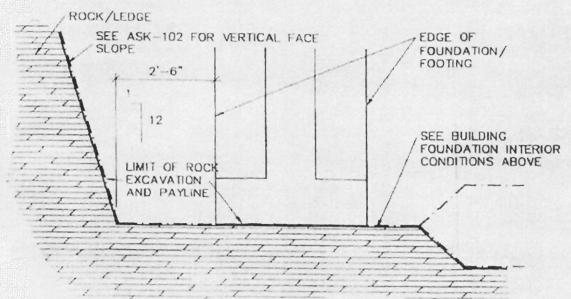
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The following Acceptance/Inspection Schedule was added for SUBCLIN 0005AB:

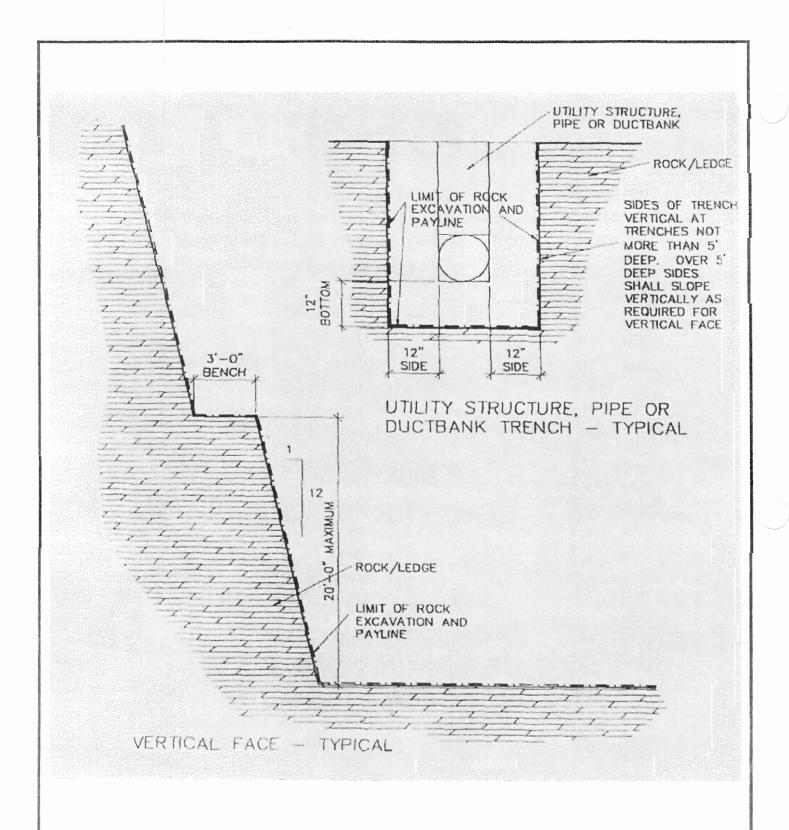
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(End of Summary of Changes)





BUILDING FOUNDATION EXTERIOR CONDITION TYPICAL STV Incorporated ROCK EXCAVATION 225 Park Avenue South **PAYMENT LINES - TYPICAL USMA: THOMAS JEFFERSON HALL** New York, NY 10003 WEST POINT TEL: 1-(212)-777-4400 **NEW YORK** PROJ. NO.: 11145 SCALE: NONE | DATE: 10/29/2003 | DRAWING: ASK-101 FAX: 1-(212)-473-2780 SECTION 02222 Page 9



STV Incorporated 225 Park Avenue South New York, NY 10003 TEL: 1-(212)-777-4400 FAX: 1-(212)-473-2780

ROCK EXCAVATION
PAYMENT LINES - TYPICAL

USMA: THOMAS JEFFERSON HALL

WEST POINT

**NEW YORK** 

PROJ. NO.: 11145 | SCALE: NONE | DATE: 10/29/2003 | DRAWING: ASK-102

USMA: THOMAS JEFFERSON HALL WEST POINT, NEW YORK

### **SECTION 02222 - ROCK EXCAVATION**

#### APPENDIX A: SUBSURFACE DATA

#### **CONTENTS:**

- A.1 BORING LOGS FROM LA-SERIES BORINGS (1992)
- A.2 BORING LOGS FROM M-SERIES BORINGS (2002)
- A.3 RESULTS OF A-SERIES AND ALT-SERIES AUGER PROBES (2003)
- **A.4** BORING LOGS FROM D-SERIES BORINGS (2003)

### **APPENDIX A.1**

BORING LOGS

FOR

LA-SERIES BORINGS

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2.1		4	1		-	Well-gr	aded gr	avel wi	th silt	and san	id (GW-Q	1)	
21	and the second second second		1	0 1	1	subroun	J& Ilne ded gra	to coa vel: ab	rse, hai out 15%	rd, suba fine to	ngular ( Coarse		
22				Q	]	hard, s	ubangul	ar to s	ubround	ed sand:	about		
TECHNOLOGIC	ADD STREET, ST			- American		10% sil	ty fine	s with	low pla	sticity,	rapid	· Marie Construction	
23		1.	1	VIANORA (VIA TO		ldilatan	ce, low	dry st	rength	and low	toughne	38	

T					********				966
			RING_& O., INC.	· · •		TEST BORING LOG	В	ORÎNG	NO. LAS
PRO	JECT S	ubte	rranean I	ibra	iry Ani	nex, Wet Point, NY	SH	IT.NO. 2 OF	2
1 1			rup Corpo	rati	on		PR	ЮЈ. ИО.	BB-5810
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY		IDENTIFICATION	<b></b> .	RE	MARKS
24	*				max.	size 38 mm; brown; petroleum odor; we	t.		•
25							5		
26		5	12		fine	graded gravel with sand (GW) - about 6 to coarse, hard, subangular gravel wi	0% th		
27			8	1	coars	e flat particles; about 35% fine to se, hard, subangular sand; trace fines size 35 mm; grey; petroleum odor; wet	;		
28					with	layer silty sand/sandy silt (SM/ML)- t 55% fine sand; about 45% silty fines			
29					with stren	low plasticity rapid dilatance, low d ngth and low toughness; max. size= fin	ry		-dr
30		6	13		sand: Well-	; grey; *petroleum*odor; *wet. -graded gravel (CW) about 90% fine to			
31			10		inant	se, hard, subangular gravel; 10% predo tly coarse, hard, subangular sand; max	m		
32			23	-	size	= 32 mm; grey, wet.			
33									
35		Rl			Diam 93.4	ond core drilled from 34' to 39' recov %	ere		
36									
37	<b>отничальн</b> я каки паражара, концект			-					
38	The second secon			1					
39		R2			Diam	ond core drilled from 39' to 44'			
40	make electronic (1971 - 1971 - 1974 -				reco	vered 100%			
41									
42				1		•			
44									
45					Bott	com of boring is 44'.			
46	and the second of the second o					**			
47			Mary granger and the Plant State of Sta						
48			\$200 to the region of the second of the seco	1				energia de la companya de la company	
.00		West representations		-	-POOT-NAME OF THE PARTY OF THE			nd Production and American	

													J-5966
	SEY LLIN							TËST E	BORING	LOG		В	ORING NO. LA9
					an	Library	Annex	. West	t Poin	t, NY		SH	T.NO. 1 OF 2
CLIEN						oration					,		B NO. BB-5810
LOCA	TION					n the f		by the	clien	t		EL	EVATION 158.5 (App.
GROU	M DNF	ATER						CAS.	SAMP.	CORE	TUBE		RMIT NO.
D	ATE	T	IME		PTH	CASING	TYPE	HW	SS	NWD4			TE START 2-10-92
				18'		33'	DIA.	4"ID	2"0D	2 1/8		·	TE FINISH 2-11-92
		_					WT.	300#	140# 30"	ļ			NILLER BW/BM
T			DI 0	L )ws	T >	<del> </del>	FALL	124	130		<u>'</u>	IN	SPECTOR
DEPTH FT.	CASING BLOWS	SAMPLE NO.	O SAM SPC	N IPLE OON R 6"	SAMPLE			IDENT	IFICATI	ON	and the state of t		REMARKS
1	43												
	1.5				-	,							*Drilled ahead o
2	_15_	1			-								casing with a
	13				1								Tricone roller
3													
4	33												
		1		19	-	Well-g	raded g	gravel w	ith sil	t and s	and (GW-	-GM)	
٠5	22	-		19	-	about	/0% fir	ne to co	parse, h	ard, su	oangula: ard	r	
	*			25 31	-	gravel;	about wlar ea	20% III	ne to co out 10%	silty f	ines wi	th	
6		1			1	low pl	asticit	v. rapi	id dilat	ance, 1	ow dry		
7					7	streng	th and	low toug	ghness;	max. si	ze= 22 i	mn;	
		]					, moist						
8					_								
					-								
9		-		17	$\dashv$	17-11-	oveded.	cond vi	th grave	al /uall-	-oradod		
		2		1.7 2.5	-	well-	graded 1 with	sand (S	W/GW) al	bout 55%	fine t	0	
10		7		28	7	coars	e. hard	, suban	gular sa	and; abo	out 40%	-	
11				39		fine	to coar	se, har	d, subai	ngular (	gravel;		
				-		trace	fines;	max. s	ize= 22	mm; gre	ey brown	ì;	
12		_		untino martina	_	moist							
			-		$\dashv$								
13		-	-		$\dashv$								
14													
'													
15				1		Cile		andu ci	ilt (SM/	MI) abo	ut 55% (	fino	
				4		Sand	about	45% sil	lty fine	s with	low play	stic	
16		-		5		itv	rabid o	dilatano	ce, low	dry str	ength ar	nd	
	,		AND DESCRIPTION OF THE PERSON NAMED IN	6		low	oughnes	ss; max.	. size=	fine sa	nd; tan	;	
17						mois		•			-		
1	8		And the second										
1	9		accept palency of the Property										
			-		-							-0 <sub>E</sub>	
2	0		4	9		Well	-graded	gravel	with sa	and (GW)	about	70%	
			'	14		fine	to coa	rse, ha	rd, suba	angular	gravel;		
							+ 25% f	ine to	coarse.	hard.	subangul	ar	escentivi
2				23		abou	C 23/6 L	1110 00	course				1
	22	has all Philippin		25 36i		sand	; trace m; wet.	fines;	max. s	ize= 35	mm; gre	Р	American Company

	- Con-					
JE	RSEY	BOF	RING &		La transfer to the state of the	J-5966
DF	RILLIN	IG C	O., INC.	-	TEST BORING LOG	BORING NO. LA9
CLI	ENT	ubte	rranean L rup Corpo	ibra	ry Annex, Wet Point, NY	SHT.NO. 2 OF 2
1 1			BLOWS	m'	Off	PROJ. NO. BB-5810
DEPTH FT.	CASING BLOWS	SAMPLE NO.	ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	· IDENTIFICATION	REMARKS
24						
					,	
25		5	26	1	Silty sand with gravel (SM) about 65% fine	to
26			20	1	coarse, hard, subangular sand; about 20% fi	ne l
27			15 30	-	to coarse, hard subrounded gravel; about 15 silty fines with low plasticity, rapid	%
21		1	30	]	dilatance, low dry strength and low toughne	ss:
28					max. size= 23 mm; brown; moist.	
29				1		
30		6	22	1	Silty sand with gravel (SM) about 65% fine	to
31			11	1	coarse, hard, subangular sand; about 20% fi	ne
			9	-	to coarse, hard, subrounded gravel; about 1	5%
32		1	14	1	silty fines with low plasticity, rapid dilatance, low dry strength and low toughne	ss:
33				-	max. size= 24 mm; brown; moist.	
34		- D1		1	Diamond core drilled from 33' to 38' recove	red
		RI		]	52".	
35		1		+		
36				1		
1 22				-		
37		1		_		
38		-		-		
39				+		
40		-		+		
41				]	Bottom of boring is 38'.	
				-		
42		1 .		1		
43				-		
44				1		
		1				
45		1		-	3	
46						
				-		
47		-				
48		-	The first the same of the same			
AND DESCRIPTION		NA CONTRACTOR OF THE PERSON OF		-		
				,		

													J-5966
	RSEY ILLIN				÷ <u> </u>	180-	당 A	TEST E	ORING	LOG	ar barr	B	ORÎÑG NO. LAIO
PRO.	JECT					Library		, Wes	Poin	t, NY	The standing of the second standing of the second Standing	SHT	T.NO. 1 OF
CLIE		Sve	rdr	up C	orpo	ration	1						3 NO. BB-5810
			abl	ishe	d i	the !	tield t			*		ELE	VATION 159.5 (APPro
	UND W		-	· · · · · · · · · · · · · · · · · · ·				CAS.	SAMP.	CORE	TUBE	PEF	RMIT NO.
D	ATE		IME	DEI	PTH	CASING	TYPE	HW	SS	NWD4			TE START 2-11-92
						31'	DIA.	4"ID	2"OD	2 1/8		<b></b>	TE FINISH 2-12-92
	-			<del> </del>			WT.	300#	140# 30"			<b></b>	ILLER BW/BM
			01.	1	T >		I PALL	124	130			1113	PECTOR
DEPTH FT.	CASING BLOWS	SAMPLE NO.	SAN SP	OWS ON APLE OON R 6"	SAMPLE			IDENT	FICATI	ON	er op de ger die die Albert die en de die die de de		REMARKS
1	_51				1								
	0.0		<b></b>		-								*Drilled ahead of:
2	_32	1			-								casing with a
	37				1								Tricone roller bit
3		1		Management of the comment of the comment	1								
4	26_												
51	*	-			-		, ,	.L	-1 /00	about 5	5% fina		
		1	******************************	17	-	Silty	sand wi	th grav	ei (SM)	about 5	15% 1111e ur 25%	: 10	
6		-		26 7	$\dashv$	coarse	fines w	subang ith low	nlasti	nd; abou city, ra	noid		
,			$\frac{1}{2}$		1	dilata	ince. lo	w dry s	trength	and low	toughr	ness	
7		1			7	about	20% fin	e to co	arse, h	ard, sub	pangular	: [	
8						gravel	; max.	size=19	mm; br	own; mo:	ist.		
"		7					•						•
9					_								
					4								
10		$\perp$			-	0'14		th orm	101 (54)	about	55% fine	e to	
		2		21 20	-	Silty	sand wi	illi grav	ular sa	ind; abo	ut 25% s	silty	,
"		-		14	-	fines	with lo	w plast	icity.	rapid d	ilatance	9	
12	,	1		11		low d	rv stre	ngth and	i low to	oughness	; about	20%	
'						fine	to coars	se, hard	i, subar	ngular g	ravel; r	max.	
13	3			***************************************	_	size=	21 mm;	brown;	moist.				
14	4	$\dashv$		apper Marie Street, and the second second									
				and the state of t						5W-5A	1	0	
15	5	<del>-</del> 3		17		Well-	graded	gravel v	with sar	nd (EX)	about &	5%	
11	6			28		fine	to coar	se, har	d, subar	ngular g	ravel;		
		of the grant of		8		about	30% fi	ne to c	oarse, l	nard, si ze= 20 π	ıbangula	r n	
1	7			10		wet.	60	Linco			,		
1	8	_											
1	9			MATERIAL STATES									
	20								1 /0:	\	58 Eir		
			4	7		Silty	y sand w	vith gra	vel (SM	) about	2016 F1F	ie to	
	21			7		coar	se, hard	i, subar	igular s	and; ab	ranid	17	
	Principal Princi			8		silt	y fines	with ic	w plast	icity,	om toney rahra	ากคร	s ·
	22	6/2 - + 6- / W/ / WWW	ļ	12		dila	tance,	low ary	strengt	h and l	uhanoul:	ar ares:	
	and the same	No.				abou	t 45% [	ine to c	30 mm	hard, s grey br	omu: mo.	ist.	C) Harries Corp.
1	23		l_			grav	CI: max	, 5165-	JU IIIII	510 01			And the second s

				J-5966
JERSEY BORING & DRILLING CO., INC.		TEST BORING LOG	В	ORING NO. LA10
PROJECT Subterranean	Libra	Annex, Wet Point, NY		IT.NO. 2 OF 2
CLIENT Sverdrup Corp	orati		PR	10J. NO. BB-5810
DEPTH CASING SAMPLE SOUN SOUN SOUN SOUN SOUN SOUN SOUN SOUN	SAMPLE RECOVERY	IDENTIFICATION		REMARKS
PER 6"  24  25  5  18  26  30  37  38  39  40  41  42  43  44  45  46  47  48	20	ell-graded sand with silt and gravel (SW bout 70% fine to coarse, hard, subangular brounded sand; about 20% fine to coarse and; subangular to subrounded gravel; about silty fines with low plasticity, rapidlatance, low dry strength and low tough ex. size= 29 mm; brown and gray; moist wockets silty sand/sandy silt (SM/ML) about 45% silty fines with lasticity, rapid dilatance, low dry strength low toughness; max. size= fine sand; bist.  iamond core drilled from 31' to 36' ecovered 58".	r to e, out d ness ith out low ngth	



Boring No.: <u>LA-4</u> Core No.: <u>R-1</u> Depth: <u>2.0' - 7.0'</u>

Very light grey (N8), light bluish grey (5B 7/1), dark grey (N3) & light brownish grey (5YR 6/1) very hard, very slightly to slightly weathered Granitic & Micaceous GNEISS with very thin flow banding patterns & very closely to closely spaced joints & fractures.

#### Joint Description:

DISTANCE FROM TOP OF CORE TO CENTER + OF JOINT (Inches)	APPROX. ANGLE WITH CORE AXIS (Degrees)	JOINT CONDITION	SUM OF LENGTH FOR RQD (Inches)
13.5 16.5 18.0 21.0 29.0 29.5 31.25 36.5 38.25 44.75 End Of Core @ 49.0	n/a n/a 60 90 40 50 70 30 50 50	Irregular Fracture zone, only fragments available for examination Irregular Stained, slickensided Stained, irregular Stained, rough Stained, irregular Stained, slickensided Stained, slickensided Stained, irregular Stained, rough	13.5 - - 21.5 - 26.75 - 33.25 37.5

Core Recovery: 49.0" or 82%

Rock Quality Designation (RQD): 62%

7 Pieces & Fragments; > 12 Joints & Fractures/5 Feet

Boring No.: <u>LA-5</u> Core No.: <u>R-1</u> Depth: <u>5.0' - 10.0'</u>

Medium dark grey, very light grey (N8) & brownish grey (5YR 4/1) medium hard to very hard, moderately severely to slightly weathered Granitic MICA SCHIST with very thin flow banding & foliation patterns & very closely to closely spaced joints & fractures.

-grading to-Light grey (N7), very light grey (N8), light bluish grey (5B 7/1) & dark grey (N3) very hard, very slightly weathered Granitic & Micaceous GNEISS with very thin to thin flow banding patterns & closely spaced joints & fractures below 45.0 ".

#### Joint Description:

DISTANCE FROM TOP OF CORE TO CENTER + OF JOINT (Inches)	APPROX. ANGLE WITH CORE AXIS (Degrees)	JOINT CONDITION	SUM OF LENGTH FOR RQD (Inches)
0 - 5	n/a	Fracture zone, only fragments	-
		available for examination	
5.0	n/a	Stained, irregular	-
6.5	40	Slightly stained, irregular	-
9.25	60	Slightly stained, irregular	-
13.0	50	Stained, rough	-
15.0	50	Stained, rough	-
15.75	50	Stained, rough	_
16.75	50	Stained, rough	
17.5	50	Stained, rough	_
21.5	40	Stained, rough	4.0
23.25	50	Stained, soil filled, <1/16"	_
24.0	50	Stained, soil filled, <1/16"	_
26.25	50	Stained, rough	
30.75	n/a	Irregular	8.5
32.5	n/a	Irregular	_
34.5	50	Stained, rough	_
32.5-40.25	n/a	Fracture zone, 9 very closely	_
10.05	- / -	spaced joints	
40.25	n/a	Stained, irregular Stained, irregular	13.25
45.0	n/a	Stained, irregular	21.0
52.75	n/a .@ 57.75"	Scarned, Illegular	26.0
End Of Core	, e 57.75		20.0

Core Recovery: 57.75" or 96%
Rock Quality Designation (RQD): 43%
13 Pieces & Fragments; > 28 Joints & Fractures/5 Feet



Boring No.: <u>LA-6</u> Core No.: <u>R-1</u> Depth: <u>7.0' - 12.0'</u>

Light bluish grey (5B 7/1), very light grey (N8) & dark grey (N3) very hard, very slightly weathered Granitic, Micaceous GNEISS with very thin flow banding patterns & very to moderately closely spaced joints & fractures.

#### Joint Description:

DISTANCE FROM TOP OF CORE TO CENTER + OF JOINT (Inches)	APPROX. ANGLE WITH CORE AXIS (Degrees)	JOINT CONDITION	SUM OF LENGTH FOR RQD (Inches)
2.5 13.0 20.5 30.5 30.5 - 32.5 32.5 33.0 45.25 48.5 End Of Core @ 57.75	60 30 30 50 n/a 50 n/a 40	Stained, rough Irregular, partially broken on tight joint Stained, rough Fracture zone, only fragments available for examination Irregular Tight Stained, irregular Stained, rough	- 10.5 18.0 28.0 - - 40.25 - 49.5

Core Recovery: 57.75" or 96%
Rock Quality Designation (RQD): 82%

<sup>6</sup> Pieces & Fragments; > 8 Joints & Fractures/5 Feet

Boring No.: <u>LA-7</u> Core No.: <u>R-1</u> Depth: <u>8.5' - 13.5'</u>

Very light grey (N8), light bluish grey (5B 7/1), dark grey (N3) & light brownish grey (5YR 6/1) very hard, very slightly to slightly weathered Granitic, Micaceous GNEISS with very thin flow banding patterns & very to moderately closely spaced joints & fractures.

#### Joint Description:

DISTANCE FROM TOP OF CORE TO CENTER + OF JOINT (Inches)	APPROX. ANGLE WITH CORE AXIS (Degrees)	JOINT CONDITION	SUM OF LENGTH FOR RQD (Inches)
3.5 9.25 16.0 18.75 19.5 20.5 34.25 36.0 36.25 39.75 40.0 41.5 44.5 48.0 48.0 - 51.5 57.25 End Of Core @ 59.0	50 50 90 90 30 90 40 50 70 60 50 50 n/a 30 60	Stained, rough Stained, rough Stained, irregular Stained, irregular Stained, irregular Irregular Stained, rough Stained, rough Stained, rough Tight Stained, rough Rough Stained, rough Fracture zone, only fragments available for examination Stained, irregular	5.75 12.5 - - 26.25 - - - - - - 32.0

Core Recovery: 59" or 98%
Rock Quality Designation (RQD): 53%

12 Pieces & Fragments; > 16 Joints & Fractures/5 Feet



Boring No.: <u>LA-8</u> Core No.: <u>R-1</u> Depth: <u>34.0' - 39.0'</u>

Light bluish grey (5B 7/1), very light grey (N8) & dark grey (N3) very hard, very slightly weathered Granitic, Micaceous GNEISS with very thin to thin flow banding patterns & very to moderately closely spaced joints & fractures.

#### Joint Description:

DISTANCE FROM TOP OF CORE TO CENTER + OF JOINT (Inches)	APPROX. ANGLE WITH CORE AXIS (Degrees)	JOINT CONDITION	SUM OF LENGTH FOR RQD (Inches)
2.5 7.5 18.25 30.5 30.5 35.0 35.0 38.5 53.5 End Of Core @ 55.5	90 35 90 50 40 40 40 30 90	Irregular, BROKEN BY CORING Stained, smooth Irregular Stained, rough Stained, rough Stained, irregular Stained, rough Rough, BROKEN BY CORING	2.5 7.5 18.25 30.5 - 35.0 - 50.0 52.0

Core Recovery: 55.5" or 92%

Rock Quality Designation (RQD): 87%

8 Pieces & Fragments; 8 Joints & Fractures/5 Feet

Boring No.: <u>LA-8</u> Core No.: <u>R-2</u> Depth: <u>39.0' - 44.0'</u>

Light bluish grey (5B 7/1) & light grey (N7) very hard, fresh Granitic, Micaceous GNEISS with very thin flow banding patterns & very closely to widely spaced joints & fractures.

#### Joint Description:

TOP OF CORE ANGLE WITH TO CENTER + CORE AXIS	SUM OF LENGTH OR RQD Inches)
2.75 40 Stained, rough 2.75 40 Stained, rough 23.25 50 Rough, BROKEN BY CORING Irregular, BROKEN BY CORING 60.0	- 20.5 44.0 57.25

Core Recovery: 60.0" or 100%

Rock Quality Designation (RQD): 95%

3 Pieces & Fragments; 2 Joints & Fractures/5 Feet



Boring No.: LA-9 Core No.: R-1 Depth: 33.0' - 38.0'

Light bluish grey (5B 7/1), very light grey (N8) & dark grey (N3) very hard, fresh Micaceous, Granitic GNEISS with very thin to thin flow banding patterns & moderately close to widely spaced joints & fractures.

#### Joint Description:

DISTANCE FROM TOP OF CORE TO CENTER + OF JOINT (Inches)	APPROX. ANGLE WITH CORE AXIS (Degrees)	JOINT CONDITION	SUM OF LENGTH FOR RQD (Inches)
36.25 End Of Core @ 52.5	90	Irregular	36.25

Core Recovery: 52.5" or 88%

Rock Quality Designation (RQD): 88%

2 Pieces; 1 Joint or Fracture/5 Feet



Boring No.: <u>LA-10</u> Core No.: <u>R-1</u> Depth: <u>31.0' - 36.0'</u>

Light bluish grey (5B 7/1), very light grey (N8) & dark grey (N3) very hard, fresh Micaceous, Granitic GNEISS with very thin to thin flow banding patterns & closely to moderately closely spaced joints & fractures.

#### Joint Description:

DISTANCE FROM TOP OF CORE TO CENTER + OF JOINT (Inches)	APPROX. ANGLE WITH CORE AXIS (Degrees)	JOINT CONDITION	SUM OF LENGTH FOR RQD (Inches)
2.5 5.0 26.5 End Of Core @ 57.5	70 70 40	Irregular Irregular Rough	- 21.5 52.5

Core Recovery: 57.5" or 96%
Rock Quality Designation (RQD): 88%
4 Pieces; 3 Joints or Fractures/5 Feet

### **APPENDIX A.2**

FOR
M-SERIES BORINGS
(2002)

# $STV_{Inc.}$

### Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

BOREHOLE NO. M-1 SHEET NO. 1 OF 3 PROJECT NO. 11027

SURFACE ELEV. +159.8 DATUM: NGVD

	1		<del></del>	·			DATOR	A: NGVD
Daily Progress	Depth (ft)	Casing Blows	No. & Type	Depth (ft)	Spoor Blows			Notes
6/10/2002	-1 -2 -3	A U G E R	D-1B	0 - 1 $1 - 2$ $2 - 3$	3 6 5 5	4" Topsoil, Brown silty SAND, tr gravel (SM) (8 Dark gray c-f SAND (SP) (6 Brown sandy SILT, tr gravel (ML) (19		Start boring at 10:30 am
	-4 -5 -6 -7 -8		D-2B D-3 D-4	3 - 4 4 - 6 6 - 8 8 - 9 . 1	20 17 17 15 24 32 29 20 16 9	Brown c-f SAND and GRAVEL, tr silt (GP-SP) (1	8") s A N D	
	-9 -10 -11 -12 -13 -14 -15 -16 -17 -18 -19		C-1	9.5 - 14.5 14.5 - 19.5	14   50/1"	Gray granitic GNEISS, slightly weathered REC = 60"/60" = 100% RQD = 33"/60" =55%  Gray granitic GNEISS, slightly weathered REC = 60"/60" = 100% RQD = 40"/60" = 67%	B E D R O C K	Spoon refusal at 9.1 ft
	-20 -21 -22 -22 -23					Bottom of boring at 19.5 ft	Phy.	End of boring at 4 pm

D=splitspoon (dry) sample P= tube sample using piston head S=tube sample using fixed head NR=no recovery C=core sample Casing Blows = blows/foot to advance casing in soil and inches per minute to drill in rock.

ST	V Inc. Borehole Log	BOREHOLE NO. M-1							
PROJE	USMA Library and Learning Center SHEET NO. 2 OF 3 PROJECT NO. 11027								
LOCA'	TION: West Point, New York	SURFACE ELEV. +159.8 DATUM: NGVD							
TES	Contractor: Aquifer Drilling and Testing Inc Driller: Richard Cor								
PAY QUANTITIES	3.5-inch soil boring = 9.1 ft Piston tube (P) samples Finish de								
EQUIPMENT	Drill Rig: CME Truck mounted rig  Methods to used to stabilize borehole:  3.5" size casing from 0 to 9 feet 2" OD split spoon (D) size casing from to feet OD piston tube (P) samud from to feet OD fixed tube (S) size casing from 0 to 9 feet NX size core barrel,  Casing Hammer 140 lbs. 30" drop Sampler Hammer lbs. dr	ampler piston head							
WATER LEVEL READINGS	Borehole Water Level Readings  Hole Casing Water Date Time Depth Depth Pepth * Ambient Conditions (rain etc)  Observation Well Readings  Date Time Depth* Date Time Depth *	Observation Well Sketch  Strata  Depths  0							

Filter type

### Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

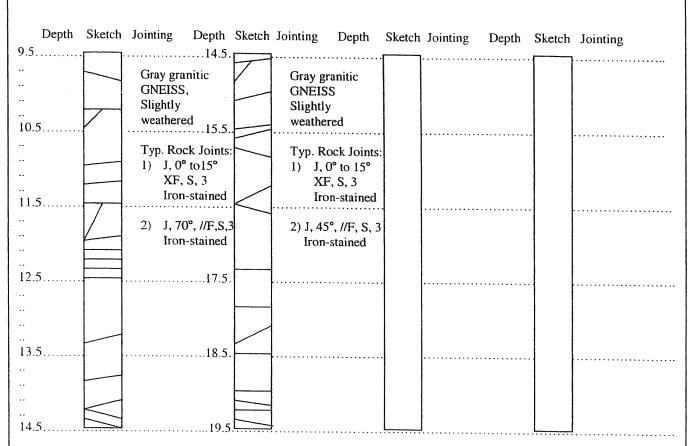
BOREHOLE NO. M-1 SHEET NO. 3 OF 3 PROJECT NO. 11027 COORDINATES:

SURFACE .ELEV. +159.8 DATUM: NGVD

#### **ROCK CORE SKETCH**

RUN RUN RUN

RUN



Recovery: 100%

100%

(Percent)

RQD:

55%

**TYPE** 

67%

**ORIENTATION** 

#### LEGEND

SURFACE CONDITON

J - natural joint // - parallel C - curved 1 - slick MB - mechanical X - crossing I - irregular 2 - smooth F - foliation break S - straight 3 - rough < - angle with the S - stratification horizontal U - unfoliated or

unstratified

# $STV \ {\tt Inc.}$

## Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

BOREHOLE NO. M-2 SHEET NO. 1 OF 3 PROJECT NO. 11027

SURFACE ELEV. +160.2 DATUM: NGVD

<b></b>	T		T				·	
Daily Progress	Depth (ft)	Casing Blows	No. & Type	Depth (ft)	Spoon Blows	Sample Description 6" Classification Recovery (inches)		Notes
6/11/2002	-1 -2 -3 -	A U G E R	D-1	0-2 2-4	3 10 11 8 10 7 5	4" Topsoil Brown sandy SILT, tr asphalt, gravel (ML) (20") Brown c-f SAND and GRAVEL, some silt (10") (GM-SM)	F I L	Start boring at 12:45 pm
NAME OF THE PROPERTY OF THE PR	-4 - -5	•	D-3	4 -4.8	9 9 100/3"	Light gray gravelly c-f SAND (SP) (3")	SAND	Spoon refusal at 4.75 ft
	-6 -7		C-1	5.8 10.8		Gray granitic GNEISS, slightly weathered REC = 60"/60" = 100% RQD = 48"/60" = 80%		
SANOLON COMPANYA PROPERTY AND PAGE 1970.	-8					100 - 40 700 - 60 N	B	
	-9 - -10						D R	
American Company of the Company of t	-11		C-2	10.8 -		Gray granitic GNEISS, slightly weathered	0	
	-12 - -13					REC = 60"/60" = 100% RQD = 50"/60" = 83%	К	
SOPPOSITION DESIGNATION DESIGNATION DE LA COMPANSION DE L	-14							
	-15							
A TO STATE OF THE	-16					Bottom of boring at 15.8 ft		End of boring at 4 pm
	-17							
	-18							
	-19							
CONCRUENCED DAYS	-20						A CONTRACTOR OF THE CONTRACTOR	
HONOCOUNTY TO THE	-21							
COMMENSATION OF THE STATE OF TH	-22						**	
BECOMPTION	-23							
-		1						L

D=splitspoon (dry) sample P=tube sample using piston head S=tube sample using fixed head NR=no recovery C=core sample Casing Blows = blows/foot to advance casing in soil and inches per minute to drill in rock.

Province the street course		
S	Inc. <u>Borehole Log</u>	BOREHOLE NO. M-2 SHEET NO. 2 OF 3
PROJI	ECT: USMA Library and Learning Center	PROJECT NO. 11027
LOCA	TION: West Point, New York	SURFACE ELEV. +160.2 DATUM: NGVD
TTES	Contractor: Aquifer Drilling and Testing Inc Driller: Richard Comfo	
PAY QUANTITIES	Lineal feet of:  2.5-inch soil boring  Split spoon (D) samples = 3  Start date of the spoon of t	:: 6/11/02 Rig days 0.5
EQUIPMENT	Drill Rig: CME Truck mounted rig  Methods to used to stabilize borehole:  3.5" size casing from 0 to 5.8 feet 2" OD split spoon (D) san size casing from to feet OD piston tube (P) sam mud from to feet OD fixed tube (S) sam 5" OD ID auger from 0 to 4.5 feet NX size core by	npler piston head
	Casing Sampler Hammer 140 lbs. 30" drop Hammer lbs. drop	)
LEVEL READINGS	Borehole Water Level Readings  Hole Casing Water Date Time Depth Depth Depth * Ambient Conditions (rain etc)  Observation Well Readings	Observation Well Sketch  Strata  Depths  0
WATER	Date Time Depth* Date Time Depth *  Measured from ground surface	Screen size type Rise size type

Filter type

### Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

BOREHOLE NO. M-2 SHEET NO. 3 OF 3

PROJECT NO. 11027 COORDINATES:

SURFACE .ELEV. +160.2 DATUM: NGVD

#### **ROCK CORE SKETCH**

RUN RUN RUN RUN Depth Sketch Jointing Depth Sketch Jointing Depth Sketch Jointing Depth Sketch Jointing .....10.8 Gray granitic Gray granitic GNEISS, **GNEISS** Slightly Slightly weathered weathered ..11.8.. 6.8..... Typ. Rock Joints: Typ. Rock Joints: 1) J, 0° to 15° 1) J, 0° to 15° .. XF, S, 3 XF, S, 3 Iron-stained Iron-stained 7.8..... 2) J, 50°, //F,S,3 2) J, 50°, //F, S, 3 Iron-stained Iron-stained .....13.8. 8.8 .....14.8. 9.8..... 15.8 10.8....

Recovery: 100%

100%

(Percent)

RQD:

80%

83%

#### LEGEND

ORIENTATION **TYPE** 

SURFACE CONDITON

J - natural joint

MB - mechanical break

< - angle with the horizontal

// - parallel

X - crossing F - foliation

S - stratification

U - unfoliated or unstratified

C - curved

1 - slick

I - irregular

2 - smooth

S - straight

3 - rough

# $STV_{\, \text{Inc.}}$

## Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

BOREHOLE NO. M-3 SHEET NO. 1 OF 3 PROJECT NO. 11027

SURFACE ELEV. +159.5 DATUM: NGVD

-			T				DATUN	1: NGVD
Daily Progress	Depth (ft)	Casing Blows	No. & Type	Depth (ft)	Spoon Blows	Sample Description 6" Classification Recovery (inches)	Strata	Notes
6/10/2002	-1 -2 -3	A U G E R	D-1	0-2 2-4	3 6 6 3 3 2	4" Topsoil Brown silty m-f SAND, tr cinder, gravel (14") (SM)  Brown c-f sandy GRAVEL, some silt, trace brick, concrete (GM) (5")	F I L	Start boring at 5 pm
in a series de la composition della composition	-4		D 2	4.43	1	Light gray very f SAND and large gravel (SP) (2")		
002	- -5		D-3	4 -4.3	100/3"	Light gray very f SAND and large gravel (SP) (2")	SAND	Spoon refusal at 4.3 ft
6/11/2002			C-1	6.5 – 11.5 11.5 – 16.5		Gray granitic GNEISS, slightly weathered REC = 60"/60" = 100% RQD = 50"/60" = 83%  Gray granitic GNEISS, slightly weathered REC = 60"/60" = 100% RQD = 33"/60" = 55%	B E D R O C K	End of day at 6 pm Restart at 7 am (6/11/02)
	-17					Rottom of boring at 16.5 fe		End of boring at
Practical Necession	-18					Bottom of boring at 16.5 ft		11 am
ORCHOOLS AND	-19							
THE STATE OF THE S	-20							
	-21							
SCHOOL SERVICE	-							
	-22						16	
Name of the Party	-23	Andrien makes market films						
							L	

D=splitspoon (dry) sample P= tube sample using piston head S=tube sample using fixed head NR=no recovery C=core sample Casing Blows = blows/foot to advance casing in soil and inches per minute to drill in rock.

S	T	V	Inc
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## Borehole Log

PROJECT: USMA Library and Learning Center

\*Measured from ground surface.

LOCATION: West Point, New York

BOREHOLE NO. M-3

SHEET NO. 2 OF 3 PROJECT NO. 11027

SURFACE ELEV. +159.5

Rise size

Filter type

type

		DATUM: NGVD
IES	Contractor: Aquifer Drilling and Testing Inc Driller: Richard C	omfort
TIT	Surveyor: Inspector : Niki Ni	tichaivorrakul
PAY QUANTITIES	3.5-inch soil boring = 6.5 ft Piston tube (P) samples Finish	Time: late 6/10/02 Rig days 0.75 date 6/11/02 Standby-hours ion well installation date
	Drill Rig: CME Truck mounted rig	
IT	Methods to used to stabilize borehole: Samplers used:	
EQUIPMENT	size casing from to feet 2" OD split spoon (D) sampler	2.5" size drill rods
QUIP	size casing from to feet OD piston tube (P)	sampler piston head
Ĕ	mud from to feet OD fixed tube (S)	sampler Shelby drive head
	5" OD ID auger from 0 to 4.5 feet NX size co	ore barrel,
	Casing Sampler Hammer 140 lbs. 30" drop Hammer lbs.	drop
		Observation Well Sketch
and the state of t	Borehole Water Level Readings	Strata Depths
ELECTRONIC PROPERTY.	Hole Casing Water  Date Time Depth Depth Pepth Ambient Conditions (rain etc)	
\GS		
READINGS		
RE		
EL		
LEVEL	Observation Well Readings	
ER	Date Time Depth* Date Time Depth*	
WATER		
>		
		Screen size type

## Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

BOREHOLE NO. M-3SHEET NO. 3 OF 3

PROJECT NO. 11027 COORDINATES:

SURFACE .ELEV. +159.5 DATUM: NGVD

RUN	RUI	N	RUN	RUI	N
Depth Sketo	ch Jointing Depth		Depth Sketch	Jointing Depth	Sketch Jointing
5	Gray granitic GNEISS, Slightly weathered 12.5	Gray g GNEIS Slightl weathe	SS y		
5	Typ. Rock Joints: 1) J, 0° to15° XF, S, 3 Iron-stained	1) J,	cock Joints: 0° to 30° , S, 3 on-stained		
	2) J, 45°, //F,S,3 Iron-stained	betwee 16.5 ft	en 11.5 to		
5	14.5.				
0.5	15.5.				
1.5			L	<u>J</u>	

Recovery: 100%

100%

(Percent)

RQD:

83%

55%

#### LEGEND

-	TYPE	ORIENTATION	SURFACE C	SURFACE CONDITON		
	J - natural joint MB - mechanical	// - parallel X - crossing	C - curved I - irregular	1 - slick 2 - smooth		
-	break	F - foliation	S - straight	3 - rough		
	< - angle with the	S - stratification				
	horizontal	<ul><li>U - unfoliated or</li></ul>				

unstratified

### Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

SURFACE ELEV. +159.8 DATUM: NGVD

-	T							
Daily Progress	Depth (ft)	Casing Blows	No. & Type	Depth (ft)	Spoon Blows	Sample Description 6" Classification Recovery (inches)	Strata	Notes
6/11/2002	- -1	A U	D-1	0-2	3 8	4" Topsoil Gray-brown gravelly c-f SAND, some silt (SM) (14")	FILL	Start boring at 4:45 pm
6/1	-2	G E R	D-2	2 – 2.8		Gray-brown c-f sandy GRAVEL, some silt (5") (GM)	S A N D	Spoon refusal at
6/12/2002	1 2 1		C-1	9.3 – 14.3	100/3"	Gray granitic GNEISS, slightly weathered REC = 44"/44" = 100% RQD = 20"/44" = 45%  Gray granitic GNEISS, slightly weathered REC = 60"/60" = 100% RQD = 37"/60" = 62%	B E D R O C K	2.8 ft End of day at 5:50 pm Restart at 7 am (6/12/02)
	-15 -16 -17 -18 -19 -20 -21 -22 -23					Bottom of boring at 14.3 ft		End of boring at 10 am

D=splitspoon (dry) sample P= tube sample using piston head S=tube sample using fixed head NR=no recovery C=core sample Casing Blows = blows/foot to advance casing in soil and inches per minute to drill in rock.

	NAMES OF TAXABLE PARTY								
STV Inc.  Borehole Log  Borehole Log  BOREHOLE NO. N SHEET NO. 2 OF									
PROJECT: USMA Library and Learning Center PROJECT NO. 11027									
LOCATION: West Point, New York  SURFACE ELEV. +1 DATUM: NGVD	59.8								
Contractor: Aquifer Drilling and Testing Inc Driller: Richard Comfort	No. of Carle								
Surveyor: Inspector : Niki Nitichaivorrakul									
Contractor: Aquifer Drilling and Testing Inc  Surveyor:  Lineal feet of:  2.5-inch soil boring  Split spoon (D) samples = 2  3.5-inch soil boring = 5.5 ft  NX size rock coring = 8.8 ft  Fixed tube (S) samples  Driller: Richard Comfort  Driller: Richard Comfort									
Drill Rig: CME Truck mounted rig	жини на при на								
Methods to used to stabilize borehole: Samplers used:									
3.5"size casing from 0 to 5.7 feet 2" OD split spoon (D) sampler 2.5" size drill rods									
Samplers used:  3.5"size casing from 0 to 5.7 feet 2" OD split spoon (D) sampler 2.5" size drill rods  size casing from to feet OD piston tube (P) sampler piston									
mud from to feet OD fixed tube (S) sampler Shelby drive he	ad								
5" OD ID auger from 0 to 4.5 feet NX size core barrel,									
Casing Sampler Hammer 140 lbs. 30" drop Hammer lbs. drop									
Observation Well Borehole Water Level Readings	Sketch								
Strata Dept	hs								
Hole Casing Water  Date Time Depth Depth * Ambient Conditions (rain etc)									
NGS NGS									
READINGS									
RE I									
Observation Well Readings									
Date Time Depth* Date Time Depth*									
Bate Time Depth *									
Screen size type									

Filter type

### Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

BOREHOLE NO. M-4 SHEET NO. 3 OF 3 PROJECT NO. 11027 COORDINATES:

SURFACE .ELEV. +159.8 DATUM: NGVD

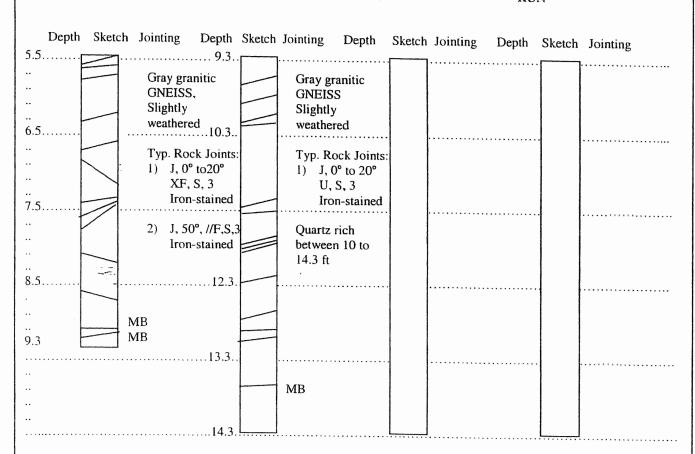
#### ROCK CORE SKETCH

RUN

RUN

RUN

RUN



Recovery: 100%

45%

100%

(Percent)

RQD:

62%

#### **LEGEND**

**TYPE** 

#### **ORIENTATION**

#### SURFACE CONDITON

J - natural joint

// - parallel

C - curved

1 - slick

MB - mechanical break

X - crossing F - foliation I - irregular

2 - smooth

< - angle with the

S - stratification

S - straight

3 - rough

horizontal

U - unfoliated or

unstratified

# $STV_{\, \text{Inc.}}$

## Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

BOREHOLE NO. M-5 SHEET NO. 1 OF 3 PROJECT NO. 11027

SURFACE ELEV. +158.9 DATUM: NGVD

		Т					DATUN	1: NGVD
Daily Progress Depth (ft)	Casing Blows	No. & Type	Depth (ft)	Spoon Blows		Recovery (inches)	Strata	Notes
-1 -1 -2 -2 -3	A U G E R	D-1	0-2	3 4 4 5 4	4" Topsoil Brown SILT, tr f sand, roots (ML)	(24")	F I L	Start boring at 11 am
-4  -5  -6	<b>—</b>	D-3	4 - 6	7 6 3 4 5	Brown c-f SAND, some gravel, trace silt (SP) Same as above	(13") (18")	S A N D	
-7 8		D-4	6 – 6.2 7.8 –	50/2''	Gray granitic GNEISS, slightly weathered REC = 60"/60" = 100%	(2")		Spoon refusal at 6.2 ft
-9 10 			12.8		RQD = 30"/60" = 50%		B E D	
-12 -13 -14		C-2	12.8 – 15.8		Gray granitic GNEISS, slightly weathered REC = 36"/36" = 100% RQD = 14"/36" = 39%	l	R O C	
-15 - -16 - -17		C-3	15.8 – 20.8		Gray granitic GNEISS, slightly weathered REC = 60"/60" = 100% RQD = 20"/60" = 33%			
-18 - -19 - -20					•			
-21 - -22 - -23					Bottom of boring at 20.8 ft		4	End of boring at 2:30 pm
-23								

D=splitspoon (dry) sample P= tube sample using piston head S=tube sample using fixed head NR=no recovery C=ccre sample Casing Blows = blows/foot to advance casing in soil and inches per minute to drill in rock.

ST	V Inc. Borehole Log	BOREHOLE NO. M-5 SHEET NO. 2 OF 3								
PROJE	ст: USMA Library and Learning Center	PROJECT NO. 11027								
LOCA	TION: West Point, New York	SURFACE ELEV. +158.9 DATUM: NGVD								
IES	Contractor: Aquifer Drilling and Testing Inc Driller: Richard Comfort									
TIT	Surveyor: Inspector : Niki Nitichaivorra	akul								
PAY QUANTITIES	Lineal feet of:  2.5-inch soil boring  3.5-inch soil boring = 7.8 ft  NX size rock coring = 13 ft  Number of:  Split spoon (D) samples = 4  Piston tube (P) samples  Finish date 6/12/0  Observation well in	02 Standby-hours								
	Drill Rig: CME Truck mounted rig									
Į,	Methods to used to stabilize borehole: Samplers used:									
ME	3.5" size casing from 0 to 7.8 feet 2" OD split spoon (D) sampler 2.5"	size drill rods								
EQUIPMENT	size casing from to feet OD piston tube (P) sampler	piston head								
Ĕ	mud from to feet OD fixed tube (S) sampler	Shelby drive head								
	5" OD ID auger from 0 to 4 feet NX size core barrel,									
**************************************	Casing Sampler Hammer 140 lbs. 30" drop Hammer lbs. drop									
		ervation Well Sketc								
	Borehole Water Level Readings Stra	ata Depths								
	Hole Casing Water  Date Time Depth Depth Pepth * Ambient Conditions (rain etc)									
YGS										
READINGS										
RE4										
温										
LEVEL	Observation Well Readings									

### **Observation Well Readings**

WATER

Date	Time	Depth*	Date	Time	Depth *
					-
			1		
***************************************					
*Measure	ed from g	ground sur	face.		

Sketch hs Screen size type

type

Rise size

Filter type

### Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

BOREHOLE NO. M-5 SHEET NO. 3 OF 3 PROJECT NO. 11027 COORDINATES: SURFACE .ELEV. +158.9

DATUM: NGVD

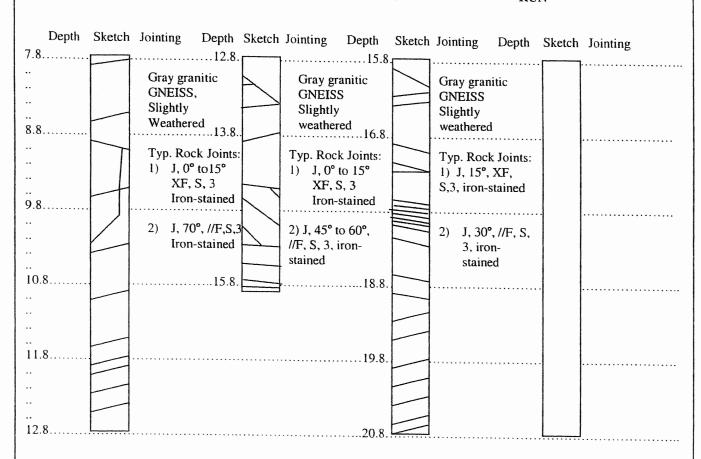
#### **ROCK CORE SKETCH**

RUN

RUN

RUN

RUN



Recovery: 100% (Percent)

100%

100%

RQD:

50%

39%

33%

#### **LEGEND**

**TYPE** 

#### **ORIENTATION**

#### SURFACE CONDITON

J - natural joint

// - parallel

C - curved

1 - slick

MB - mechanical

X - crossing

I - irregular

break

F - foliation

2 - smooth

< - angle with the horizontal

S - stratification

U - unfoliated or

unstratified

S - straight

3 - rough

# $STV \; {\hbox{\scriptsize Inc.}}$

## Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

BOREHOLE NO. M-6 SHEET NO. 1 OF 3

PROJECT NO. 11027

SURFACE ELEV. +159.4 DATUM: NGVD

Daily Progress	Depth (ft)	Casing Blows	No. & Type	Depth (ft)	Spoon Blows /	Sample Description 6" Classification Recovery (inches)	Strata	Notes
6/12/2002	-1 -2 -3	D R I L	D-1	0-2 2-2.2	3 4 8 4 50/2"	4" Topsoil Brown SILT, tr sand, gravel, brick, roots (24")	F I L L	Start boring at 3 pm  Spoon refusal at 2.2 ft
	-4 5 6		C-1	5 - 10		Gray granitic GNEISS, slightly weathered REC = 60"/60" = 100% RQD = 57"/60" = 95%	B E	
	-7 -8 - -9 -		C-2	10 -15		Gray granitic GNEISS, slightly weathered	D R O C	
	-11 -12 -13					REC = 60"/60" = 100% RQD = 59"/60" = 98%	K	
	-14 - -15					Bottom of boring at 15.0 ft		End of boring at
	-16 - -17 - -18							5:30 pm
HOUSEWARDS AND A CONTROL OF THE PROPERTY OF TH	-19 -20 -21							
a constant	-22						47° .	

D=splitspoon (dry) sample P= tube sample using piston head S=tube sample using fixed head NR=no recovery C=core sample Casing Blows = blows/foot to advance casing in soil and inches per minute to drill in rock.

S	T	V	Inc
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# Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

BOREHOLE NO. M-6

SHEET NO. 2 OF 3 PROJECT NO. 11027

SURFACE ELEV. +159.4

Filter type

									DATUM	1: NGVD
ES	Contrac	tor: A	quifer D	rilling and	l Testing In	IC	Driller:	Richard Com	fort	nga garanggan di akkina nakkira ki kino dikabikan di anaran ang aran ang at ang arang ang ang ang ang ang ang
TIT	Surveyo	or:		naivorrakul						
PAY QUANTITIES	3.5-ir	eet of: ach soil t ach soil t size roo	e: 6/12/02 te 6/12/02 well installati	Rig days 0.33 Standby-hours ion date						
	Drill Ri	g: CME	Truck m	ounted rig						
Ŀ	Method	s to used	l to stabil	lize boreho	ole:	San	nplers use	d:		
EQUIPMENT	3.5"si	ze casin	g from	0 to 4	feet	2" OD split	spoon (D	) sampler	2.5" size	drill rods
QUIP	si	ize casin	g from	to	feet		OD pisto	on tube (P) sar	npler	piston head
E		mu	d from	to	feet		OD fixe	d tube (S) sai	mpler Shell	by drive head
	OD	ID aug	er from	to	feet		NX siz	e core barrel,		
	Casing Hamme	er 140	lbs. 3	0'' drop	,	Sam <sub>l</sub> Ham		lbs. dro	p	
			Rore	hole Wa	ter I eve	l Readings			Observat	ion Well Sketch
900000000000000000000000000000000000000					Water				Strata	Depths
a i	1		Y Y 1							
	Date	Time	Hole Depth	Casing Depth	Depth *	Ambient Co	onditions	(rain etc)		
NGS	Date	Time				Ambient Co	onditions	(rain etc)		0
ADINGS	Date	Time				Ambient Co	onditions (	(rain etc)		0
READINGS	Date	Time				Ambient Co	onditions (	(rain etc)		0
	Date	Time				Ambient Co	onditions (	(rain etc)		0
LEVEL READINGS	Date		Depth		Depth *	Ambient Co	onditions (	(rain etc)		0
LEVEL	Date		Depth	Depth Well R	Depth *	Ambient Co	onditions (	(rain etc)		
LEVEL		Obse	Depth	Depth Well R	Depth *		onditions (	(rain etc)		
		Obse	Depth	Depth Well R	Depth *		onditions (	(rain etc)		
LEVEL		Obse	Depth	Depth Well R	Depth *		onditions (	(rain etc)	Screen size	type
LEVEL	Date	Obse	Depth	Depth  Well R  h* Dat	Depth *		onditions	(rain etc)	Screen size Rise size	

STV Inc.

# Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

BOREHOLE NO. M-6 SHEET NO. 3 OF 3 PROJECT NO. 11027 COORDINATES: SURFACE .ELEV. +159.4

DATUM: NGVD

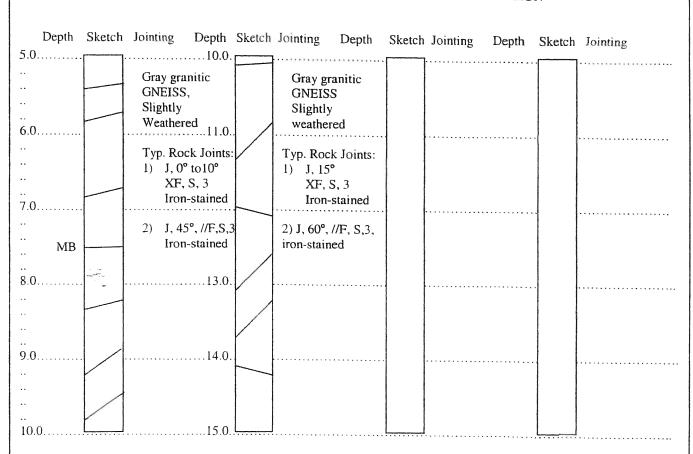
ROCK CORE SKETCH

RUN

RUN

RUN

RUN



Recovery: 100%

100%

(Percent)

RQD:

95%

98%

	ka' i	r .	III a	N	т
Jus.	Ľ,	U	Ľ	TA	L

TYPE

#### **ORIENTATION**

SURFACE CONDITION

J - natural joint

// - parallel

C - curved

1 - slick

MB - mechanical

X - crossing

break

F - foliation S - stratification I - irregular

2 - smooth

< - angle with the

S - straight

3 - rough

horizontal

U - unfoliated or

unstratified

# STV Inc.

# Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

BOREHOLE NO. M-7 SHEET NO. 1 OF 2 PROJECT NO. 11027

SURFACE ELEV. +157.9 DATUM: NGVD

					THE RESERVE THE PARTY OF THE PA				1: NGVD
Daily Progress	Depth (ft)	Casing Blows	No. & Type	Depth (ft)	Spoon Blows	Sample Description  6" Classification	Recovery (inches)	Strata	Notes
6/13/2002	- -1 - -2	A U G E R	D-1	0-2	2 2 4 3	4" Topsoil Brown gravelly c-f SAND, some silt (SM)	(18")		Start boring at 7 am
	- -3 - -4		D-2	2-4	3 2 2 3	Same as above	(2")	F	
	- -5 -	*	D-3	4-6	3 2 1	Same as above	(12")	L	
	-6 - -7 -		D-4	6 – 8	2 2 2 3	Same as above	(18")	L	
	-8 - -9 -		D-5	8 - 10	5 2	Same as above	(16")		
	-10 - -11 - -12		D-6	10.4 11.4 - 11.8	50/4"	Brown silty SAND, some gravel (SM)  Gray granitic GNEISS, slightly weathere REC = 5"/5" = 100%	(3") d	SAND B E	Spoon refusal at 10.3 ft  Core barrel bit
	-13 - -14 - -15		With Roller Bit	11.8 – 15.5		Gray granitic GNEISS (probable)		D R O C K	breaks at 11.8 ft Rollerbit to 15.5 ft to test rock Observe quartz and mica flakes from wash.
	-16 - -17					Bottom of boring at 15.5 ft			End of boring at 2:30 pm
	-18		To all the second secon						
	-19 - -20								
	-21 -21								
	-22 - -23				promote and the second			1	

D=splitspoon (dry) sample P= tube sample using piston head S=tube sample using fixed head NR=no recovery C=core sample Casing Blows = blows/foot to advance casing in soil and inches per minute to drill in rock.

STV Inc.

#### Borehole Log

PROJECT: USMA Library and Learning Center

LOCATION: West Point, New York

2.5-inch soil boring

BOREHOLE NO. M-7

SHEET NO. 2 OF 2 PROJECT NO. 11027

SURFACE ELEV. +157.9

DATUM: NGVD

QUANTITIES

PAY

EQUIPMENT

READINGS

LEVEL

WATER

Contractor:

Aquifer Drilling and Testing Inc

Driller: Richard Comfort

Surveyor:

Inspector: Niki Nitichaivorrakul

Lineal feet of:

Number of:

Drilling Time:

Split spoon (D) samples = 6

Start date 6/13/02

Rig days 1.0

3.5-inch soil boring = 11.4 ft NX size rock coring = 0.4 ft Fixed tube (S) samples

Piston tube (P) samples

Finish date 6/13/02 Observation well installation date 6/13/02

Standby-hours

3.5-inch rock drilling = 3.7 ft

Drill Rig: CME Truck mounted rig

Methods to used to stabilize borehole:

Samplers used:

2" OD split spoon (D) sampler

2.5" size drill rods

size casing from

3.5"size casing from

feet

feet

0 to 11.4

OD piston tube (P) sampler

piston head

Depths

5

10

15

Cement

Bentonite Seal

Filter

10 ft Well Screen

mud from

feet

OD fixed tube (S) sampler

Shelby drive head

**Observation Well Sketch** 

Strata

**FILL** 

**BEDROCK** 

5" OD ID auger from 0

NX size core barrel,

Casing

Hammer 140 lbs. 30" drop Sampler

Hammer

lbs. drop

#### **Borehole Water Level Readings**

10

feet

		Hole	Casing	Water	
Date	Time	Depth	Depth	Depth *	Ambient Conditions (rain etc)

#### **Observation Well Readings**

Date	Time	Depth*	Date	Time	Depth *
6/13/02	3:30pm	5.2 ft			1
	3:35pm	**			
	5:25pm	7.0 ft			
	_				
				207111702114114000 O	
*Measur	ed from g	ground sur	face. *	*Add wa	iter up to top of well

Screen size 2" type 20

Rise size type PVC

Filter type: Well gravel

USMA: THOMAS JEFFERSON HALL WEST POINT, NEW YORK

## **APPENDIX A.3**

RESULTS OF

A-SERIES AND ALT-SERIES

AUGER PROBES

(2003)

# Atlantic Testing Laboratories, Limited Rock Probe Summary

Proposed Library and Learning Center West Point, New York CD2209

Probe Number	+Surface Elevation	Depth Overburden	Bedrock Elevation		
	(meter)	(meter)	(meter)		
A-1	48.89	0.64	48.25		
A-2	48.94	0.76	48.18		
A-3	48.90	2.29	46.61		
A-4	48.86	0.76	48.10		
A-5	48.59	7.16	41.43		
A-6	48.84	2.59	46.25		
A-7	48.92	0.76	48.16		
A-8	48.88	1.31	47.57		
A-9	48.80	1.98	46.82		
A-10	48.45	8.99	39.46		
A-11	48.73	2.07	46.66		
A-12	48.83	2.56	46.27		
A-13	48.82	0.98	47.84		
A-14	48.85	2.74	46.11		
A-15	48.42	5.24	43.18		
A-16	48.79	4.72	44.07		
A-17	48.68	0.76	47.92		
A-18	48.74	0.91	47.83		
A-19	48.76	0.91	47.85		
A-20		*Cancelled			
A-21	48.42	12.04	36.38		
A-22		**Cancelled			
A-23	48.41	0.98	47.43		
A-24	48.56	3.96	44.60		
A-25	48.21	0.91	47.30		
A-26	48.23	0.61	47.62		
A-27	47.53	3.60	43.93		
A-28	47.92	8.17	39.75		
Alt-1	48.58***	0.76	47.82		
Alt-2	48.77***	0.88	47.89		
Alt-3	48.79***	2.29	46.50		
Alt-5	48.58***	9.30	37.28		

<sup>\*</sup>A-20 was renamed D-6.

<sup>\*\*</sup>Cancelled due to location of underground utilities.

<sup>\*\*\*</sup>Elevation provided by STV Incorporated. The elevations were interpreted from a topographic map.

<sup>+</sup>Note: The "Surface Elevation" is based on field survey by ATL. The elevation may vary slightly from the estimated surface elevations provided by STV.

USMA: THOMAS JEFFERSON HALL WEST POINT, NEW YORK

## **APPENDIX A.4**

BORING LOGS

**FOR** 

**D-SERIES BORINGS** 

(2003)

												Report No.:		CD2209-3-03	3	_
(	Client:	ST	V Incorp	orated								Boring Locati	on: See E	oring Location Pl	an	_
F	Project:	Su	bsurface	Investig	ation								7			
		Pr	oposed L	ibrary &	Learni	ng (	Cente	er				***************************************		****		-
		W	est Point,	New Yo	ork					-		Start Date:	2/26/2003	Finish Date:	2/26/2003	
1	Boring N	o.:	D-1			She	et	1	of	1		Data		ter Observations	Casina	
		_					_					Date	Time	Depth (m)	Casing : 1.77	at .
,	Ca Weight:	sing H	ammer	kg		۱۸/مi	Sar ight:		Hamı			2/26/2003	AM	*4.57		-
	Fall:			mm		Fall	-		63.5 762	kg		2/26/2003	PM_	DRY	OUT	
	on.					ı alı	•	0	102	mm		*****			Company of the Compan	
	Ground	Elev.:	48.	59 m			Bori	na A	dvanc	e Bv:		Borehole c	aved at 0.9 me	eters. *Water read	ing may	
			43/1					•	n Aug	•				ced during bedro		
						_										_
	PH	õ	DEF	тн	w		BLO	ws (	ON	L		CLASSI	FICATION	OF MATERIA	L	l≽
DEPTH (meters)	METHOD OF ADVANCE	SAMPLE NO.	O	F	SAMPLE	BLOWS ON SAMPLER PER 152 mm 51-mm O.D. SAMPLER				FIN						RECOVERY (mm)
E E	ADV	AMP	SAIN	PLE	SAL		51-m		.D.	FR	f - fine				and - 35-5 some - 20-3	*   DE
	2	Ŋ	From	То			JAI	*** E.	-11		c - course				little - 10-2 trace - 0-1	
_	A U	1	0.00	0.61	SS	23	29	8	8	0.1			& ORGANIC M	The second secon		483
-	G										Brown non-pla		some mf GRA	VEL; little SILT (mo	oist,	
-	E R	2	0.61	1.22	SS	12	2 30	3:	3 17	0.8						229
		_									i		and mf GRAVE	L; little SILT (mois	t,	
1											non-pl	astic)				
-		3	1.22	1.77	SS	21	1 16	6	100	0/10 cm	Simila	r Soil				254
-					١ ١	1				1.8						
	NX C		1.77	3.29	NX	Ì	R	UN 1		1	1	Biotite Schist		Market State of State		1524
2-	0										1	n or 100% Re	ecovery - 34% Chips ar	nd Eraamonte		
-	R										1		•	n) - RQD = 25%		
-	1					1										
	1					l										
3-	-									3.3						
:	1		3.29	4.82	NX	✝	R	UN 2	2	3.3	Grey I	Biotite Schist				149
	]					ı					1	n or 98% Re	•	- d F		
	1					ı							) - 0% Chips a an 10 cm (86 c	nd Fragments m) - RQD = 57%		
4-	]												(	,		
-	-															
			-		┼┵	╀				4.8	Borin	terminated	at 4.8 meters.			-
5-	=															
	]										Notes		II - d 246 - a - a 24		-Ai	
-	1										1. B0	enoie backfil	iicu witii on-site	soils upon comple	SUUII.	
No.	-															
6-																
	SS Sip	it Spoon S	ample			on					Drillers:		Mark Chil	ds; Paul McAloon		
		ck Care disturbed \$	Sample (Shelt	y Tube)							Inspector:		man om	, i aai mariioon		
1	Es	timated Gr	oundwater													

_	D' A										Report No CD2209-3-03	
	lient: roject:		V Incorpo		vation						Boring Location: See Boring Location Plan	
-	roject.		bsurface oposed L			na C	ente	r	•••••			
			st Point,			119 0	Citto		***********		Start Date: 2/25/2003 Finish Date: 2/25/2003	
В	loring N		D-2			Sheet 1 of 1				1	Groundwater Observations  Date Time Depth (m) Casing at	
	Са	sing H	əmmer		Sampler Hammer				amme	pr.	2/25/2003 AM *3.35 2.13	
. V	Veight:		41111101	kg		Weig		63.		kg		
F	all:			mm		Fall:		762	2	_ mm		
(	Ground I	Elev.:	48.	13 m				ng <b>Adv</b> a		•	Borehole caved at 3.5 meters. *Water reading may	
						-	8.	3 cm A	uger		be affected by water induced during bedrock coring.	
DEPTH (meters)	METHOD OF ADVANCE	SAMPLE NO.	DEF O SAM	SAMPLE	BLOWS ON SAMPLER PER 152 mm 51-mm O.D.				DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL  and - 35-50% some - 20-35%	RECOVERY (mm)	
	Z	SA	From	То	"		SAM	IPLER		٥۵	m - medium little - 10-20% c - course ltrace - 0-10%	82
	A U G E	1	0.00	0.61	SS	12	5	4	4	0.1	12.7 cm TOPSOIL & ORGANIC MATERIAL  Dark Brown mf+ SAND; some SILT; little mf+ GRAVEL; trace  ORGANIC MATERIAL (roots); (moist, non-plastic)	305
1-	R	2	0.61	1.22	SS	5	4	4	3	0.9	Brown mf SAND; some mf+ GRAVEL; little SILT; trace ORGANIC MATERIAL (roots); (moist, non-plastic)	152
		3	1.22	1.83	SS	3	4	13	20		Brown mf+ SAND; little mf GRAVEL; little SILT (moist, non-plastic)	203
2-	NX	4	1.83	2.23	SS	16	25	100/	7.6 ci	m 2.2	Brown c-mf SAND; some mf GRAVEL; little SILT (moist, non-plastic)	279
3	CORE		2.23	3.75	NX		RU	JN 1			Grey Biotite, Quartz Schist 152 cm or 100% Recovery 15 Pieces (142 cm) - 7% Chips and Fragments 7 Pieces longer than 10 cm (102 cm) - RQD = 67%	1524
4					1					3.7	Boring terminated at 3.7 meters.  Notes:  1. Borehole backfilled with on-site soils upon completion.	
5-												
0		it Spoon Si	stople								Drillers: Mark Childs; Paul McAloon	

										Report No.:		CD2209-3-0	3	1
(	Client:	ST	V Incorp	orated						Boring Locat	on: See Bo	ring Location Pl	an	
1	Project:	Su	bsurface	Investig	ation									
		Pro	oposed L	ibrary &	Learni	ng Cent	er	***						
		_We	est Point,	New Yo	ork					Start Date:	2/25/2003	Finish Date:	2/25/2003	
	Boring N	o.:	D-3			Sheet	_1_ of	1				er Observations		
		_		-		_		-		Date	Time	Depth (m)	Casing at	
		sing H					mpler Hamn			2/25/2003	AM	*3.05	1.58	_
	Weight:	***************************************		kg		Weight:	63.5	kg		2/25/2003	PM_	*0.91	OUT	_
	Fall:	-		mm		Fall:	762	mm				***************************************		
	Ground	Elev.:	48.0	04 m	-	Bon	ing Advance	By:		Borehole c	aved at 1.8 met	ers. *Water read	ling may	
						8	3.3 cm Auge	er		be affected	by water indu	ed during bedro	ock coring.	
	T									01.400				
π ê	METHOD OF ADVANCE	SAMPLE NO.	DEF		ш		WS ON MPLER	유		CLASSI	FICATION (	OF MATERIA	L	RY
DEPTH (meters)	동	ם	O SAM		SAMPLE	PER	152 mm	DEPTH OF CHANGE					end - 35-50%	O E
ع ۵	A B	SAN			8		nm O.D. MPLER	찚공	f - fine m - medium				some - 20-35% little - 10-20%	RECOVERY (mm)
	<u> </u>		From	То					c - course				trace - 0-10%	
-	A U	1	0.00	0.61	SS	17 20	16 12	0.1			SORGANIC MA	TERIAL EL; trace SILT (n	noiet	432
-	G				1			0.0	non-pi		SOLIE III GRAV	EL, l'ace SILT (II	ioist,	
-	Ř	2	0.61	1.22	SS	9 5	5 9	0.6	Brown	c-mf SAND;	little mf GRAVE	L; trace SILT (mo	oist,	254
4	-								non-p				,	
1						1								
	-	3	1.22	1.46	SS	14 1	00/10 cm		Simila	r Soil				203
-	NX		1.58	3.11	NX	P	UN 1	1.6	Grav	Biotite Schist				1499
	CO		1.50	0.11	1111		.011 1		1	m or 98% Re	covery			1498
2-	R								1		- 10% Chips ar	•		
	j E								6 Pie	es longer tha	n 10 cm (89 cm	) - RQD = 58%		
-	-													
	=					100 miles								
3	-							3.1						
	_								Borin	g terminated	at 3.1 meters.			
-	-								Notes	<b>:</b> :				
	E										led with on-site	soils upon comple	etion.	
4-	=													
;	7													
	3													
	1													-
-	7													
5-	$\exists$													
	-													
	7													
	]													
6-														
	NX Ro	R Spoon S		Tob.					Drillers:	and white the state of the stat	Mark Child	s; Paul McAloon	1	
1		disturbed St timated Gre	Sample (Shelt oundwater	by (ube)					Inspecto					

									Report No.:	entranta de la composição	CD2209-3-0	3	
C	Client:	ST	V Incorp	orated					Boring Locat	ion: See Bo	ring Location Pl	an	
P	roject:	Su	bsurface	Investig	ation							we are a state of the state of	THE PERSONNEL PROPERTY.
		Pre	posed L	ibrary &	Learni	ng Center	-		***************************************				
		We	st Point,	New Yo	rk				Start Date:	2/27/2003	Finish Date:	2/27/2003	
	Boring N	lo ·	D-4		,	Sheet 1 of _	1				r Observations		1
	oung N		D~;			Silect Oi			Date	Time	Depth (m)	Casing at	
	Ca	asing H	ammer			Sampler Hamn	ner		2/27/2003	AM	*2.47	1.07	
'	Weight:			kg	,	Weight: 63.5	kg		2/27/2003	AM	DRY_	OUT	
1	Fall:		-	mm		Fall: <u>762</u>	mm		************	**********			· l
(	Ground	Elev.:	48.	83 m		Boring Advance	By:		Borehole o	aved at 1.2 met	ers. *Water read	ling may	
						8.3 cm Auge	er	-	be affected	by water induc	ed during bedro	ock coring.	
<b>-</b> 1													
	METHOD OF ADVANCE	Š	DEF		m	BLOWS ON	r iii		CLASSI	FICATION C	F MATERIA	L	Ϋ́
DEPTH (meters)	HODA	SAMPLE NO.	O SAM	F IPLE	SAMPLE	SAMPLER PER 152 mm	DEPTH OF CHANGE					and - 35-50%	RECOVERY (mm)
DE	AP	AM			SA	51-mm O.D. SAMPLER	범정	f - fine m - medium				some - 20-35%	SEC .
		on .	From	То				c - course				trace - 0-10%	
-	A U	1	0.00	0.24	SS \	107 100/10 cm	0.1			ORGANIC MATI	, , , , , , , , , , , , , , , , , , ,		254
-	G							1	i c-mt SAND; lastic)	little SILT; trace	f GRAVEL (mois	it,	
=	E R	2	0.61	0.94	SS	30 29 100/2.5	m	1	·	and c-mf GRAV	EI · little BOCK		330
-		_	0.01	0.01	00	00 20 100/2:51		1		e SILT (moist, n			330
1	NX		1.07	2.59	NX	RUN 1	1.1		sh Grey Pegm				1448
	CO					.,		1 ""	on Orey regin	aute			1440
_	R						1.7						
-	E							Grey	Granitic Gnei	SS			1
2	}							1	m or 95% Re	•			
-								1	-	) - 0% Chips and in 10 cm (107 cn	-		
-							2.6		-	•	.,		
-	-						T	Borin	g terminated	at 2.6 meters.			
3-								Note:	s:				
	1							1		led with on-site s	oils upon comple	etion.	
-	-												
	1												
4	3												
, :	1												
	1												
	3												
	1												
5	1												
	3												
-	1												
6-	1		1	<u></u>									
-	ee 6 -	3 C											
	NX Ro	it Spoon Sa ck Core		«Tuba"				Drillers:	decomposition of the second of	Mark Childs	; Paul McAloon		
/		disturbed Si imated Gro	ample (Shelb undwaler	y lube)				Inspector					

Su	V Incorposed L	Investiç		ng Cı	ontor				Boring Location: See Boring Location Plan	
Pr	oposed L			ng C	antar					
-					cirtei					
	st Point,	New Yo	ork						Start Date: <u>2/27/2003</u> Finish Date: <u>2/27/2003</u>	
D.:	D-5			Shee	t	1	of _	1	Groundwater Observations  Date Time Depth (m) Casing at	
sing H	ammer				Sam	pler H	Hamn	ner	2/27/2003 AM *4.57 3.05	
-		kg		Weig	ıht:	63	3.5	kg	2/27/2003 AM *0.61 OUT	
-		mm		Fall:		70	62	mm		
Elev.:	48.1	89 m	_		Borin	g Adv	vance	By:	Borehole caved at 2.6 meters. *Water reading may	
					8.3	cm.	Auge	r	be affected by water induced during bedrock coring.	
o.					RI OV	IS O	Ni .	ш	CLASSIFICATION OF MATERIAL	≿
AMPLE N	0	F	SAMPLE	P 5	SAMI ER 1 1-mr	PLER 52 m n O.C	R m D.	DEPTH O	1 - fine and - 35-50% some - 20-35% some - 20-35%	RECOVERY
Ś	From	То			OAM				c - course trace - 0-10%	
1	0.00	0.61	SS	52	80	28	28	0.1	10 cm TOPSOIL & ORGANIC MATERIAL  Brown c-mf SAND; some mf GRAVEL; trace SILT (moist, non-plastic)	559
2	0.61	1.22	SS	25	28	35	´ 19	1.1	Brown c-mf SAND; some mf GRAVEL; little SILT (moist, non-plastic)	305
3	1.22	1.83	ss	21	16	14	19		Brown mf+ SAND; little SILT; trace ORGANIC MATERIAL (roots); (wet, non-plastic)	51
4	1.83	2.44	SS	8	9	12	25	1.8	Brown mf SAND; little mf+ GRAVEL; trace SILT (moist, non-plastic)	457
5	2.44	2.93	SS	20	16	18	100	/2.5cm	Similar Soil	432
								3.0		_
	3.05	4.57	NX		RU	N 1			Grey Biotite Schist  145 cm or 95% Recovery  11 Pieces (154 cm) - 7% Chips and Fragments  7 Pieces longer than 10 cm (114 cm) - RQD = 75%	144
								4.6	Boring terminated at 4.6 meters.  Notes:  1. Borehole backfilled with on-site soils upon completion.	
	SAMPLE NO.	ON DEF O SAM  From 1 0.00 2 0.61 3 1.22 4 1.83	Kg mm   Mm   Mm   Mm   Mm   Mm   Mm   Mm	Kg mm   Kg m	Reg   Weight   Fall:	Rev.:   48.89 m   Boring   8.3     BLOW   SAMI   PER 1   51-mr   SAMI   PER 1   SAMI	Red   Weight:   65   Fall:   7	Rev.:   48.89 m   Boring Advance   8.3 cm Auge	Name	Record   R

											R	leport No.:			CD2209-3-0	3	1
C	Client:	ST	V Incorp	orated							В	Boring Locati	on: S	ee Bo	ing Location Pl	an	1
F	Project:	Su	bsurface	Investiç	ation						_						
		Pr	oposed L	_ibrary &	Learni	ng C	enter				_						
		W	est Point	, New Yo	ork						S	Start Date:	2/26/200	3	Finish Date:	2/26/2003	
	Boring N	lo ·	D-6			Shee	at .	<u>1</u> c	\f	4					Observations		
,	oung 14	··· _	D-0	-		Snee	əl	'	"	1		Date	Tim	ie	Depth (m)	Casing at	
	Ca	sing H	ammer				Sam	pler H	amn	ner		2/26/2003	PN	1	*3.96	2.53	-
'	Weight:	-		kg		Weig	ght:	63.	5	_ kg		2/26/2003	PN	1	DRY	OUT	
F	Fall:	-		mm		Fall:		76	2	mm	-		-			***	
											-	-		-		***************************************	
(	Ground I	Elev.:	48.	62 m	_		Borin	g Adva	ance	By:		*Water read	ding may	be affe	cted by water in	nduced	
							8.	3 cm A	luge	er		during bed	rock cori	ng.			
1						T	and in contrast					01 4001		~~~	PERATERIA		
3 I	Ž U	2		PTH	Щ	1		VS ON PLER	1	유		CLASSI	FICA III	ON O	F MATERIA	L	R
DEPTH (meters)	METHOD OF ADVANCE	SAMPLE NO.		F IPLE	SAMPLE		PER 1	52 mn		DEPTH OF CHANGE		,				and - 35-50%	RECOVERY (mm)
פֿם	필	SAM			S,	'		m O.D. PLER	•	핊장	f - fine m - medium					some - 20-35% Ritte - 10-20%	REO (
			From	То					_		c - course					trace - 0-10%	
-	A U	1	0.00	0.61	SS	12	6	8	14	0.1		TOPSOIL & C			RIAL trace SILT (mo	iet	432
_	G E										non-pla		itue iiii Oi	V~ V L.L.	nace only (mo	iot,	
_	Ř	2	0.61	1.22	SS	12	10	10	9		Grey R	OCK FRAGI	MENTS; P	ossible	COBBLE (mois	st,	178
1 -											non-pla				,	•	
-																	
-		3	1.22	1.83	SS	6	7	9	10	]	1		tle mf GR	AVEL;	trace SILT (mois	st,	432
						1					non-pla	istic)					
		4	1.83	2.29	SS	9	18	100		-	Drown	o má CAND.		CDA	/FI - tenna CU T	/	070
2		7	1.03	2.25	33	ľ	10	100			non-pla		some mr	GRAV	/EL; trace SILT	(moist,	279
	]				+	+	-			-		•					
_	NX		2.53	4.05	NX	-	RI	JN 1		2.5	0						1219
-	C		2.00	1.00			• • • • • • • • • • • • • • • • • • • •	,,,,			1	iotite Schist or 80% Red					1219
3-	R					ı					1	es (97 cm) -	•	s and F	ragments		
	E										4 Piece	es longer tha	ın 10 cm (	76 cm)	- RQD - 50%		
-	1					ı											
	}																
4-	1					1000				4.1	4-00						
,	3									1	Boring	terminated a	at 4.1 met	ers.		No A 1 807 x 806 x 00	-
	1										Notes:						
	‡										1		led with or	n-site s	oils upon compl	etion.	
5	3														,,		
5	_																
	-																
	=																
6-																	
	SS Spi	t Spoon S	amole						-								
II Wash	NX Roc	ck Core	amper ample (Shelt	m Tube)							Drillers:	-	Mark	Childs	; Paul McAloon		
		imated Gro		Material							Inspector:						,

											Report No.: CD2209-3-03	
•	Client:	ST	V Incorp	orated							Boring Location: See Boring Location Plan	
1	Project:	Su	bsurface	Investig	gation							
		Pr	oposed L	_ibrary 8	Learni	ng C	enter	<u> </u>				I
		We	est Point	, New Yo	ork						Start Date: <u>2/25/2003</u> Finish Date: <u>2/26/2003</u>	
	Boring N	o ·	D-7			Shee	et .	1	of	2	Groundwater Observations	
,	Doining 14					0,100					Date Time Depth (m) Casing at	
		sing H	ammer					pler l			2/25/2003 PM DRY 7.62'	- 1
	Weight:	-		kg		Weig	ght:		.5	kg	2/26/2003 AM DRY 7.62	- 1
	Fall:			mm		Fall:		76	52	mm	2/26/2003 AM DRY 9.14	<u>.</u>
											2/26/2003 AM DRY *OUT	
	Ground	Elev.:	48.	10 m	_		Borin	g Adv	rance	By:	Borehole caved at 7 meters. Based on soil moisture	
							8.3	3 cm	Auge	er	the water table appears to be about 7 meters below	
						T					CLASSIFICATION OF MATERIAL	
Ηĝ	S S S S	Š.	DEF		۳			VS O		占띪	CLASSIFICATION OF MATERIAL	ERY
DEPTH (meters)	METHOD OF ADVANCE	SAMPLE	O SAM		SAMPLE	P	ER 1	52 m	m	DEPTH OF CHANGE	and - 35-50%	RECOVERY (mm)
ΩĒ	A G	SAM			S,			m O.E PLER		범호	7 - fine some - 20-35% m - medium into - 10-20%	RE
			From	To	00					0.4	- course Ince - 0-10%	432
-	A U	1	0.00	0.61	SS	22	33	9	11	0.1	10 cm TOPSOIL & ORGANIC MATERIAL  Brown mf+ SAND; some mf GRAVEL; little SILT; trace	432
_	GE					Ĭ				0.6	ORGANIC MATERIAL (roots); (moist, non-plastic)	
-	R	2	0.61	1.22	SS	10	7	5	5	- 0.0	Brown mf+ SAND; some mf GRAVEL; little SILT (moist,	203
1											non-plastic)	
						_						
-												
		3	1.52	2.13	SS	13	11	13	11	1	Brown c-mf SAND; and c-mf GRAVEL; trace SILT (moist,	457
:											non-plastic)	
2						1			-	-		-
	-											
-												
3	-	4	3.05	3.66	SS	21	13	23	16	-	Similar Soil	178
	]											
-	-											
4-	-											
1	-											
-	-			5.40	100	40			-10	-	Brown mf SAND: and c-mif GRAVEL: trace SILT (wet,	279
	1	5	4.57	5.18	SS	18	3 11	14	10		non-plastic)	213
5	_					1					,	
1				-	-	+						
and the same of th												
	1											
6-	7											1
		t Spean Si k Core	ample								Onllers: Mark Childs; Paul McAdoon	
1	SH Uni		ample (Shelb	y Tube)							Inspector"	1
-	631	more of the			W.C. Account Control of the Control	CONTRACTOR OF THE PARTY OF THE	7-00 mm	-	ANNEXA PROPERTY.	NA DOMESTICATION		Market Control

#### SUBSURFACE INVESTIGATION

	Boring N	No.: _	D-7		***************************************	F	Repo	rt No.	:		CD2209-3-03 Sheet <u>2</u> of <u>2</u>	•
DEPTH (meters)	METHOD OF ADVANCE	SAMPLE NO.	l c	PTH DF IPLE	SAMPLE	PE 5	SAMF ER 19 1-mn	/S Of PLER 52 mi n O.D PLER	m ).	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL   and - 35-50%   some - 20-35%   little - 10-20%   trace - 0-10%	RECOVERY (mm)
7-		7	7.62	8.23	SS	32	7	12	10	7.6	Similar Soil  Brown c-mf SAND; trace SILT (wet, non-plastic)	203
9		8	9.14	9.75	SS	15	12	12	12	9.8	Brown c-mf SAND; little cmf GRAVEL; trace SILT (wet, non-plastic)	127
11 —										0,0	Boring terminated at 9.8 meters.  Notes:  1. Borehole backfilled with on-site soils upon completion.	
12 —												
14—								A Contract of the Contract of			ut <sub>p</sub>	

											Report No.: CD2209-3-03	
Client	-	ST\	/ Incorp	orated							Boring Location: See Boring Location Plan	
Projec	ct:	Sub	osurface	Investig	gation							
		Pro	posed L	ibrary &	Learn	ing C	enter	<u>-</u>				
		We	st Point,	New Yo	ork						Start Date: 2/27/2003 Finish Date: 2/27/2	003
Boring	a No :		D-8			Shoo		4	of	2	Groundwater Observations	
DOTTI	g 140	_	D-0			Silee		<u>.</u>	01		Date Time Depth (m) Cas	ing at
	Casin	g Ha	mmer					pler	Hamn	ner	2/27/2003 AM *8.72 7	,32
Weigl	ht:			kg		Weig	ht:		3.5	_ kg	<u>2/27/2003</u> <u>PM</u> *0.91 (	DUT
Fall:	-			mm		Fall:		7	62	mm		
_										_		
Groui	nd Elev	Li .	48.7	71 m	-			_	vance	•	Borehole caved at 5.5 meters. *Water reading may	
							8.:	3 cm	Auge	r	be affected by water induced during bedrock corin	
1		. T				T					Based on soil moisture the water table appears to GLASSIFICATION OF MATERIAL	1
000	ָבְ בְּ		DEP		<b>5</b> 0		SLOV SAM			GE GE	personard infects below the sumset in the	á
METHOD OF	CN H IOMAN		SAM		SAMPLE		ER 1			DEPTH OF CHANGE		35-50% 20-35% 10-20%
	ל על על				S		SAM			꿈ㅁ	- medium	20-35% D
I A	T 1	+	0.00	To 0.61	ss \	25	50	30	15	-0.1	10 cm TOPSOIL & ORGANIC MATERIAL	0-10%
- υ			0.00	0.01			00		,,,	0.1	Brown c-mf SAND; little mf GRAVEL; trace SILT (moist,	-   '
G E											non-plastic)	
R	2	2	0.61	1.22	SS	15	9	8	7	0.8	Brown mf SAND; little SILT; trace f GRAVEL (moist,	1
=											non-plastic)	
=	-	3	1.22	1.83	SS	2	3	4	9		Reddish-Brown f SAND; and SILT; trace CLAY; trace f	
4											GRAVEL (moist, very slightly plastic)	
1												
_		4	1.83	2.44	SS	10	9	6	6		Brown c-mf SAND; little mf GRAVEL; trace SILT (moist, non-plastic)	1
=					'						non-plastic)	
1	-	5	2.44	3.05	SS	11	11	9	10	1	Brown cmf SAND; some SILT; little mf GRAVEL (moist,	7
											non-plastic)	
												-
3		6	3.05	3.66	SS	12	10	8	8		Brown mf SAND; little mf GRAVEL; trace SILT (moist, non-plastic)	1
4						V						
=	-				-	+				1		
_												
=												
_										4.6		
1		7	4.57	5.18	SS	9	4	4	5		Brown mf+ SAND; little SILT; trace f GRAVEL (moist, non-plastic)	
						V					non-pastic)	
3	-			-	-	+	and the second		-	_		-
-												
-										and the same of th		
SS	Split Spo		mple								brillers: Mark Childs; Paul McAloon	
NX	Rock Co											

#### SUBSURFACE INVESTIGATION

	Boring I	No.:	D-8			Report No.:		CD2209-3-03 Sheet 2 of 2	
DEPTH (meters)	METHOD OF ADVANCE	SAMPLE NO.	SAN	PTH OF MPLE	SAMPLE	BLOWS ON SAMPLER PER 152 mm 51-mm O.D. SAMPLER	DE:PT4 OF CHANGE	CLASSIFICATION OF MATERIAL  and . 35-50% some = 20-35% little = 10-20% little = 10-20% little = 0-10% little =	RECOVERY (mm)
7—————————————————————————————————————	NC OR E	8 SAMP	From 6.10	8.84	SS	51-mm O.D.	7.3	f - fine some = 20-35% m - medium little = 10-20%	76 T524
13									

#### APPENDIX "A"

#### ARCHITECTURAL DOOR HARDWARE SCHEDULE

#### Notes:

- 1. Complete specification includes hardware schedule and hardware specification.
- 2. Alternate manufacturers are listed in the hardware specification for the purposes of competitive bidding. These alternates may vary in performance or appearance from the "basis of design" items listed here.

	e eac	up No. 01 h SGL door(s) with th Description	ne following: Model Number	Finish	n Mfgr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W O7A LESS CYLINDER	630	SCH
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
	e eac	oup No. 01A h SGL door(s) with th Description	ne following: Model Number	Finish	n Mfgr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W O7A LESS CYLINDER	630	SCH
1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
	e eac	oup No. 01B h SGL door(s) with th Description	ne following: Model Number	Finish	n Mfgr
3	EA	HINGE	3CB1 4.5 X 4.5 NRP	652	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W O7A LESS CYLINDER	630	SCH
1	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

Quanti		n SGL door(s) with th Description	Model Number	Finish	Mfgr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W 807A KNURL LESS CYLINDER	630	SCH
1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
		oup No. 01D h SGL door(s) with th	ne following:		_
Quanti	ty	Description	Model Number	Finis	n Mfg
3	EA	HINGE	3CB1 4.5 X 4.5 NRP	652	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W 807A KNURL LESS CYLINDER	630	SCH
1	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
		SILENCER  oup No. 01E  h SGL door(s) with th	SR64  ne following:	GRY	IVE -
Hardwa Provid	re Gro			GRY Finish	-
Hardwa Provid	re Gre e eacl	oup No. 01E h SGL door(s) with th	ne following:		-
Hardwa Provid Quanti 3 1	re Gre e eacl	oup No. 01E n SGL door(s) with th Description	ne following: Model Number  3CB1 4.5 X 4.5 NRP 1E74	Finis 652 626	n Mfg: IVE BES
Hardwa Provid Quanti 3 1	re Gree e e e e e e e e e e e e e e e e	oup No. 01E h SGL door(s) with th Description HINGE	ne following: Model Number  3CB1 4.5 X 4.5 NRP 1E74 83T7S STK (2-3/4" DBLT STRIKE)	Finish 652 626 626	n Mfg: IVE BES BES
Hardwa Provid Quanti 3 1 1	re Gree each	oup No. 01E  n SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM DEADBOLT  STOREROOM LOCK	ne following: Model Number  3CB1 4.5 X 4.5 NRP 1E74 83T7S STK (2-3/4" DBLT STRIKE) L9080W O7A LESS CYLINDER	Finish 652 626 626 630	IVE BES BES SCH
Hardwa Provid Quanti 3 1 1 1	re Gree each	oup No. 01E  n SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM DEADBOLT  STOREROOM LOCK  SURFACE CLOSER	ne following: Model Number  3CB1 4.5 X 4.5 NRP 1E74 83T7S STK (2-3/4" DBLT STRIKE) L9080W O7A LESS CYLINDER 4111 EDA	Finish 652 626 626 630 689	IVE BES BES SCH LCN
Hardwa Provid Quanti 3 1 1 1	re Gree each	oup No. 01E  h SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM DEADBOLT  STOREROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER	ne following: Model Number  3CB1 4.5 X 4.5 NRP 1E74  83T7S STK (2-3/4" DBLT STRIKE) L9080W O7A LESS CYLINDER 4111 EDA FS436 X 435	Finish 652 626 626 630 689 626	IVE BES BES SCH LCN IVE
Hardwa Provid Quanti 3 1 1 1 1	re Gree each	oup No. 01E  n SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM DEADBOLT  STOREROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  PERIMETER SEAL	ne following: Model Number  3CB1 4.5 X 4.5 NRP  1E74  83T7S STK (2-3/4" DBLT STRIKE) L9080W O7A LESS CYLINDER  4111 EDA FS436 X 435 328A HEAD & JAMBS	Finish 652 626 626 630 689 626 628	IVE BES BES SCH LCN IVE ZER
Hardwa Provid Quanti 3 1 1 1	re Gree each	oup No. 01E  h SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM DEADBOLT  STOREROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER	ne following: Model Number  3CB1 4.5 X 4.5 NRP 1E74  83T7S STK (2-3/4" DBLT STRIKE) L9080W O7A LESS CYLINDER 4111 EDA FS436 X 435	Finish 652 626 626 630 689 626	IVE BES BES SCH LCN IVE ZER
Hardwa Provid Quanti 3 1 1 1 1 1	re Gre e eacl ty EA EA EA EA EA EA EA A SET EA	oup No. 01E  n SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM DEADBOLT  STOREROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  PERIMETER SEAL  DOOR SWEEP	ne following: Model Number  3CB1 4.5 X 4.5 NRP  1E74  83T7S STK (2-3/4" DBLT STRIKE)  L9080W O7A LESS CYLINDER  4111 EDA  FS436 X 435  328A HEAD & JAMBS  339A	Finish 652 626 626 630 689 626 628	IVE BES BES SCH LCN IVE ZER
Hardwa Provid Quanti 3 1 1 1 1 1	re Groe eaclety  EA EA EA EA EA EA FA FA SET EA  re Groe eacle	oup No. 01E  h SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM DEADBOLT  STOREROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  PERIMETER SEAL  DOOR SWEEP	ne following: Model Number  3CB1 4.5 X 4.5 NRP  1E74  83T7S STK (2-3/4" DBLT STRIKE)  L9080W O7A LESS CYLINDER  4111 EDA  FS436 X 435  328A HEAD & JAMBS  339A	Finish 652 626 626 630 689 626 628	IVE BES BES SCH LCN IVE ZER ZER
Hardwa Provid Quanti 3 1 1 1 1 1 1 1 4 Hardwa	re Groe eaclety  EA EA EA EA EA EA FA FA SET EA  re Groe eacle	oup No. 01E  n SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM DEADBOLT  STOREROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  PERIMETER SEAL  DOOR SWEEP  oup No. 01F  in SGL door(s) with the	ne following: Model Number  3CB1 4.5 X 4.5 NRP  1E74  83T7S STK (2-3/4" DBLT STRIKE) L9080W O7A LESS CYLINDER  4111 EDA FS436 X 435 328A HEAD & JAMBS 339A  ne following:	Finish 652 626 626 630 689 626 628 AL	IVE BES BES SCH LCN IVE ZER ZER
Hardwa Provid Quanti 3 1 1 1 1 1 1 1 Hardwa Provid	re Gree each	oup No. 01E  n SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM DEADBOLT  STOREROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  PERIMETER SEAL  DOOR SWEEP  oup No. 01F  n SGL door(s) with the Description	me following: Model Number  3CB1 4.5 X 4.5 NRP  1E74  83T7S STK (2-3/4" DBLT STRIKE) L9080W O7A LESS CYLINDER 4111 EDA FS436 X 435 328A HEAD & JAMBS 339A  me following: Model Number	Finish 652 626 626 630 689 626 628 AL	IVE BES BES SCH LCN IVE ZER ZER
Hardwa Provid Quanti 3 1 1 1 1 1 1 2 Hardwa Provid Quanti	re Gree each	oup No. 01E  n SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM DEADBOLT  STOREROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  PERIMETER SEAL  DOOR SWEEP  OUP No. 01F  n SGL door(s) with the Description  HINGE	ne following: Model Number  3CB1 4.5 X 4.5 NRP  1E74  83T7S STK (2-3/4" DBLT STRIKE)  L9080W O7A LESS CYLINDER  4111 EDA  FS436 X 435  328A HEAD & JAMBS  339A  ne following: Model Number  3CB1 4.5 X 4.5 NRP	Finish 652 626 630 689 626 628 AL	I Mfg IVE BES SCH LCN IVE ZER ZER I Mfg IVE BES
Hardwa Provid Quanti 3 1 1 1 1 1 1 4 Hardwa Provid Quanti 3 2	re Gre e eacl ty  EA EA EA EA EA SET EA re Gre e eacl ty  EA	oup No. 01E  In SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM DEADBOLT  STOREROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  PERIMETER SEAL  DOOR SWEEP  OUP No. 01F  In SGL door(s) with the Description  HINGE  MORTISE CYLINDER	me following: Model Number  3CB1 4.5 X 4.5 NRP  1E74  83T7S STK (2-3/4" DBLT STRIKE) L9080W O7A LESS CYLINDER 4111 EDA FS436 X 435 328A HEAD & JAMBS 339A  me following: Model Number 3CB1 4.5 X 4.5 NRP 1E74	Finish 652 626 630 689 626 628 AL Finish 652 626	IVE BES BES SCH LCN IVE ZER THE TENT OF TH
Hardwa Provid Quanti  3 1 1 1 1 1 2 Hardwa Provid Quanti 3 2 1	re Gree each	Dup No. 01E  In SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM DEADBOLT  STOREROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  PERIMETER SEAL  DOOR SWEEP  DUP No. 01F  In SGL door(s) with the Description  HINGE  MORTISE CYLINDER  STOREROOM LOCK	me following: Model Number  3CB1 4.5 X 4.5 NRP 1E74  83T7S STK (2-3/4" DBLT STRIKE) L9080W O7A LESS CYLINDER 4111 EDA FS436 X 435 328A HEAD & JAMBS 339A  me following: Model Number  3CB1 4.5 X 4.5 NRP 1E74 L9080W O7A LESS CYLINDER 4111 EDA	Finish 652 626 630 689 626 628 AL  Finish 652 626 630	IVE BES SCH LCN IVE ZER IMfg: IVE BES SCH

1	EA	DOOR SWEEP	339A	AL	ZER
	re Gr	oup No. 01G			
		h SGL door(s) with t	he following:		
Quanti	ty	Description	Model Number	Finish	n Mfgr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W 807A KNURL LESS CYLINDER	630	SCH
1	EA	SURFACE CLOSER	4011 EDA X ST1544	689	LCN
1	EA	OVERHEAD STOP	410S	630	GLY
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
		oup No. 01H h SGL door(s) with t	ho following:		_
Quanti		Description	Model Number	Finish	n Mfgr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W O7A LESS CYLINDER	630	SCH
	ш.	SURFACE CLOSER	4011 EDA	689	LCN
	F.Δ			007	
1	EA EA			626	TVF:
	EA EA EA	DOME STOP W/RISER SILENCER	FS436 X 435 SR64	626 GRY	IVE IVE
1 1 3 Hardwa:	EA EA re Gr e eac	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with to	FS436 X 435 SR64		IVE
1 3 Hardwa:	EA EA re Gr e eac	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with to	FS436 X 435 SR64 he following:	GRY	IVE
1 1 3 Hardwa: Provido Quantii	EA EA re Gr e eac	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with to Description	FS436 X 435 SR64  he following: Model Number	GRY Finish	IVE - n Mfgr
1 1 3 Hardwa: Provide Quantit	EA EA re Gr e eac ty EA	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with to Description HINGE	FS436 X 435 SR64  he following: Model Number 3CB1 4.5 X 4.5	GRY Finish 652	IVE
1 1 3 Hardwa: Provide Quantit	EA EA re Gr e eac ty EA EA	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with to Description HINGE MORTISE CYLINDER	FS436 X 435 SR64  he following:   Model Number  3CB1 4.5 X 4.5 1E74	GRY Finish 652 626	IVE  n Mfgr IVE BES
1 1 3 Hardwar Provide Quantit 3 1	EA EA re Gr e eac ty EA EA EA	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with to Description HINGE MORTISE CYLINDER OFFICE LOCK	FS436 X 435 SR64  he following: Model Number  3CB1 4.5 X 4.5 1E74 L9056W 07A LESS CYLINDER	GRY Finish 652 626 630	IVE  n Mfgr  IVE  BES  SCH
1 1 3  Hardwa: Provide Quantit 3 1 1	EA EA re Gr e eac ty EA EA EA	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with to Description HINGE MORTISE CYLINDER OFFICE LOCK DOME STOP W/RISER	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9056W 07A LESS CYLINDER FS436 X 435	GRY Finish 652 626 630 626	IVE  n Mfgr IVE BES SCH IVE
1 1 3 Hardwa: Provide Quantit 3 1 1 1 Hardwa: Provide	EA EA re Gr e eac ty EA EA EA EA EA EA EA	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with the description HINGE MORTISE CYLINDER OFFICE LOCK DOME STOP W/RISER SILENCER COAT & HAT HOOK  oup No. 02A h SGL door(s) with the	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9056W 07A LESS CYLINDER FS436 X 435 SR64 574  he following:	Finish 652 626 630 626 GRY 626	IVE  n Mfgr  IVE BES SCH IVE IVE IVE
1 1 3  Hardwa: Provide Quantit 3 1 1 1 1 Hardwa:	EA EA re Gr e eac ty EA EA EA EA EA EA EA	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with the secription HINGE MORTISE CYLINDER OFFICE LOCK DOME STOP W/RISER SILENCER COAT & HAT HOOK  oup No. 02A h SGL door(s) with the	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9056W 07A LESS CYLINDER FS436 X 435 SR64 574	GRY Finish 652 626 630 626 GRY	IVE  n Mfgr  IVE BES SCH IVE IVE IVE
1 1 3 Hardwa: Provide Quantit 3 1 1 1 Hardwa: Provide	EA EA re Gr e eac ty EA EA EA EA EA EA EA	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with the secription HINGE MORTISE CYLINDER OFFICE LOCK DOME STOP W/RISER SILENCER COAT & HAT HOOK  oup No. 02A h SGL door(s) with the	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9056W 07A LESS CYLINDER FS436 X 435 SR64 574  he following:	Finish 652 626 630 626 GRY 626	IVE  n Mfgr  IVE  BES  SCH  IVE  IVE  IVE
1 1 3 Hardwa: Provide Quantit 3 1 1 1 3 1 Hardwa: Provide Quantit	EA EA re Gr e eac ty EA EA EA EA EA EA EA	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with the description HINGE MORTISE CYLINDER OFFICE LOCK DOME STOP W/RISER SILENCER COAT & HAT HOOK  oup No. 02A h SGL door(s) with the description	FS436 X 435 SR64  he following:    Model Number  3CB1 4.5 X 4.5 1E74    L9056W 07A LESS CYLINDER    FS436 X 435 SR64 574  he following:    Model Number	GRY  Finish  652 626 630 626 GRY 626	IVE  n Mfgr  IVE  BES  SCH  IVE  IVE  IVE
1 1 3 Hardwa: Provide Quantit 3 1 1 1 2 Hardwa: Provide Quantit 3 3	EA EA re Gr EA	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with the description HINGE MORTISE CYLINDER OFFICE LOCK DOME STOP W/RISER SILENCER COAT & HAT HOOK  oup No. 02A h SGL door(s) with the description HINGE	FS436 X 435 SR64  he following:   Model Number  3CB1 4.5 X 4.5 1E74 L9056W 07A LESS CYLINDER FS436 X 435 SR64 574  he following:   Model Number  3CB1 4.5 X 4.5	GRY  Finish 652 626 630 626 GRY 626	IVE  n Mfgr IVE BES SCH IVE IVE IVE IVE
1 1 3 Hardwa: Provide Quantit 3 1 1 1 2 Hardwa: Provide Quantit 3 1	EA EA re Gr EA	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with the description HINGE MORTISE CYLINDER OFFICE LOCK DOME STOP W/RISER SILENCER COAT & HAT HOOK  oup No. 02A h SGL door(s) with the description HINGE MORTISE CYLINDER	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9056W 07A LESS CYLINDER FS436 X 435 SR64 574  he following: Model Number  3CB1 4.5 X 4.5 1E74	Finish 652 626 630 626 GRY 626 Finish 652 626	IVE  n Mfgr IVE BES SCH IVE IVE IVE IVE
Hardwa: Provide Quantit  1 1 3 1 1 Hardwa: Provide Quantit 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	EA EA re Gr EA	DOME STOP W/RISER SILENCER  oup No. 02 h SGL door(s) with the properties of the prop	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9056W 07A LESS CYLINDER FS436 X 435 SR64 574  he following: Model Number  3CB1 4.5 X 4.5 1E74 L9056W 07A LESS CYLINDER	GRY  Finish 652 626 630 626 GRY 626  Finish 652 626 630	IVE  n Mfgr IVE BES SCH IVE IVE IVE IVE TO Mfgr IVE BES SCH
1 1 3 Hardwa: Provide Quantit  1 1 3 1 Hardwa: Provide Quantit  3 1 1 1 1 1 1 1	EA EA re Gr EA	DOME STOP W/RISER SILENCER  OUP No. 02 h SGL door(s) with the description HINGE MORTISE CYLINDER OFFICE LOCK DOME STOP W/RISER SILENCER COAT & HAT HOOK  OUP No. 02A h SGL door(s) with the description HINGE MORTISE CYLINDER OFFICE LOCK SURFACE CLOSER	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9056W 07A LESS CYLINDER FS436 X 435 SR64 574  he following: Model Number  3CB1 4.5 X 4.5 1E74 L9056W 07A LESS CYLINDER 4011 EDA X ST1544	Finish 652 626 630 626 GRY 626  Finish 652 626 630 689	IVE  Mfgr  IVE BES SCH IVE IVE IVE IVE LCN

3	EA	SILENCER	SR64	GRY	IVE
		oup No. 02B			
		h SGL door(s) with tl			
Quantit	У	Description	Model Number	Finish	ı Migr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	OFFICE LOCK	L9056W 07A LESS CYLINDER	630	SCH
1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
	e eacl	oup No. 03 h SGL door(s) with tl Description	he following: Model Number	Finish	n Mfgr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	CLASSROOM LOCK	L9070W 07A LESS CYLINDER	630	SCH
-1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1			FS436 X 435	626	IVE
1	EA	DOME STOP W/RISER	15150 A 155		
1 3	EA	SILENCER	SR64	GRY	IVE -
1 3 Hardwar	EA	·	SR64	GRY Finish	_
1 3 Hardwar Provide	EA	SILENCER  oup No. 03A  h SGL door(s) with th	SR64		_
1 3 Hardwar Provide Quantit	EA re Gre e eacl	SILENCER  oup No. 03A  h SGL door(s) with the description	SR64  he following:  Model Number	Finish	- n Mfgr
1 3 Hardwar Provide Quantit	EA ce Gre e eacl cy EA	SILENCER  oup No. 03A  h SGL door(s) with the discription  HINGE	he following: Model Number 3CB1 4.5 X 4.5	Finish 652	n Mfgr IVE
1 3 Hardwar Provide Quantit 3	EA ce Groe each	SILENCER  oup No. 03A  h SGL door(s) with the description  HINGE  MORTISE CYLINDER	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4111 EDA	Finish 652 626 630 689	n Mfgr IVE BES SCH LCN
1 3 Hardwar Provide Quantit 3 1	EA  THE GROWN  THE ALEA  EA  EA	SILENCER  oup No. 03A  h SGL door(s) with the description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER	Finish 652 626 630	n Mfgr IVE BES SCH LCN
Hardwar Provide Quantit 3 1 1	EA  THE GROWN  THE ALEA  EA  EA	SILENCER  oup No. 03A  h SGL door(s) with the description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4111 EDA	Finish 652 626 630 689	n Mfgr IVE BES SCH LCN
Hardwar Provide Quantit  1 1 1 1 1 1 Hardwar	EA  TE Grown EA  EA  EA  EA  EA  EA  EA  EA  EA  EA	SILENCER  oup No. 03A h SGL door(s) with the description HINGE MORTISE CYLINDER CLASSROOM LOCK SURFACE CLOSER DOME STOP W/RISER	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4111 EDA FS436 X 435 SR64	Finish 652 626 630 689 626	n Mfgr IVE BES SCH LCN IVE IVE
Hardwar Provide Quantit 1 1 1 1 3 Hardwar Provide Quantit 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	EA  CE Grown EA  EA  EA  EA  EA  EA  EA  EA  EA  EA	SILENCER  oup No. 03A h SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  oup No. 03B h SGL door(s) with the Description	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4111 EDA FS436 X 435 SR64  he following: Model Number	Finish 652 626 630 689 626 GRY	n Mfgr IVE BES SCH LCN IVE IVE
Hardwar Provide Quantit 1 1 1 1 3 Hardwar Provide Quantit 3 3 Hardwar Provide Quantit 3	EA  Ce Gro EA	SILENCER  oup No. 03A h SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  oup No. 03B h SGL door(s) with the Description  HINGE	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4111 EDA FS436 X 435 SR64  he following: Model Number 3CB1 4.5 X 4.5	Finish 652 626 630 689 626 GRY	n Mfgr IVE BES SCH LCN IVE IVE
Hardwar Provide Quantit 1 1 1 1 3 Hardwar Provide Quantit 3 1 1 1 1 3 Hardwar Provide Quantit 3 1	EA  CE Groen EA  EA  EA  EA  EA  EA  EA  EA  EA  EA	SILENCER  oup No. 03A h SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  oup No. 03B h SGL door(s) with the Description  HINGE  MORTISE CYLINDER	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4111 EDA FS436 X 435 SR64  he following: Model Number 3CB1 4.5 X 4.5 1E74	Finish 652 626 630 689 626 GRY	n Mfgr IVE BES SCH LCN IVE IVE
Hardwar Provide Quantit 1 1 1 1 3 Hardwar Provide Quantit 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	EA  CE Grown EA  EA  EA  EA  EA  EA  EA  EA  EA  EA	SILENCER  OUP No. 03A  h SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  OUP No. 03B  h SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4111 EDA FS436 X 435 SR64  he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER	Finish 652 626 630 689 626 GRY	IVE BES SCH LCN IVE IVE IVE IVE SCH SCH
Hardwar Provide Quantit  1 1 1 1 1 3  Hardwar Provide Quantit 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	EA  EE Groen EA  EA  EA  EA  EA  EA  EA  EA  EA  EA	SILENCER  OUP NO. 03A  h SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  OUP NO. 03B  h SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4111 EDA FS436 X 435 SR64  he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4111 EDA	Finish 652 626 630 689 626 GRY  Finish 652 626 630 689	n Mfgr IVE BES SCH LCN IVE IVE IVE SCH IVE
Hardwar Provide Quantit 1 1 1 1 3 Hardwar Provide Quantit 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	EA  CE Grown EA  EA  EA  EA  EA  EA  EA  EA  EA  EA	SILENCER  OUP No. 03A  h SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  OUP No. 03B  h SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4111 EDA FS436 X 435 SR64  he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER	Finish 652 626 630 689 626 GRY	n Mfgr IVE BES SCH LCN IVE IVE IVE

Quanti		n SGL door(s) with t Description	Model Number	Finis	n Mfgr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W 07A LESS O/S TRIM, LESS	630	SCH
1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
1	SET	SMOKE SEAL	188A HEAD & JAMBS	628	ZER
1	EA	DOOR SWEEP	339A	AL	ZER
		oup No. 03D	he following:		_
Quanti		Description	Model Number	Finis	n Mfgr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	CLASSROOM LOCK	L9070W 07A LESS CYLINDER	630	SCH
1	EA	SURFACE CLOSER	4011 EDA X ST1544	689	LCN
1	EA	OVERHEAD STOP	410s	630	GLY
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3 Hardwa	EA re Gro	SILENCER	SR64	GRY	IVE -
Hardwa:	re Gro	SILENCER  Dup No. 03E  n SGL door(s) with to  Description  HINGE  MORTISE CYLINDER		GRY Finish 652 626	_
Hardwa: Provid Quanti  3 1	re Groe each	Dup No. 03E  n SGL door(s) with to Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK	he following:  Model Number  3CB1 4.5 X 4.5 1E74  L9070W 07A LESS CYLINDER	Finisl 652 626 630	n Mfgr IVE BES SCH
Hardwa: Provide Quanti: 3 1 1	re Groe e act ty EA EA	oup No. 03E  n SGL door(s) with to Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4011 EDA	Finisl 652 626 630 689	n Mfgr IVE BES SCH LCN
Hardwa: Provide Quanti: 3 1 1 1	re Groe eachty  EA  EA  EA  EA	oup No. 03E  n SGL door(s) with the description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4011 EDA FS436 X 435	Finisl 652 626 630 689 626	n Mfgr IVE BES SCH LCN IVE
Hardwa: Provide Quanti: 3 1 1	re Groe each	oup No. 03E  n SGL door(s) with to Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4011 EDA	Finisl 652 626 630 689	n Mfgr IVE BES SCH LCN
Hardwa: Provide Quanti:  1 1 1 3 Hardwar	re Groe each	oup No. 03E  n SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  up No. 03F  n SGL door(s) with the	he following:  Model Number  3CB1 4.5 X 4.5 1E74  L9070W 07A LESS CYLINDER 4011 EDA FS436 X 435 SR64  he following:	Finisl 652 626 630 689 626 GRY	n Mfgr IVE BES SCH LCN IVE IVE
Hardwa: Provide Quanti:  1 1 1 3  Hardwar Provide Quanti:	re Groe each	oup No. 03E  n SGL door(s) with to Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  up No. 03F	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4011 EDA FS436 X 435 SR64	Finisl 652 626 630 689 626	n Mfgr IVE BES SCH LCN IVE IVE
Hardwa: Provide Quanti:  1 1 1 3 Hardwar	re Groe each	oup No. 03E  n SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  up No. 03F  n SGL door(s) with the	he following:  Model Number  3CB1 4.5 X 4.5 1E74  L9070W 07A LESS CYLINDER 4011 EDA FS436 X 435 SR64  he following:	Finish 652 626 630 689 626 GRY	n Mfgr IVE BES SCH LCN IVE IVE
Hardwa: Provide Quanti:  1 1 1 3  Hardwar Provide Quanti:	re Groe each	oup No. 03E  n SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  up No. 03F  n SGL door(s) with the Description	he following:  Model Number  3CB1 4.5 X 4.5 1E74  L9070W 07A LESS CYLINDER 4011 EDA FS436 X 435 SR64  he following: Model Number	Finish 652 626 630 689 626 GRY	n Mfgr IVE BES SCH LCN IVE IVE
Hardwar Provide Quantis 1 1 1 3 Hardwar Provide Quantis	re Groe each	Dup No. 03E  Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  UP No. 03F  Description  HINGE	he following:  Model Number  3CB1 4.5 X 4.5  1E74  L9070W 07A LESS CYLINDER  4011 EDA  FS436 X 435  SR64  he following:  Model Number  3CB1 4.5 X 4.5	Finisl 652 626 630 689 626 GRY Finisl 652 626 630	n Mfgr IVE BES SCH LCN IVE IVE
Hardwa: Provide Quanti:  1 1 1 3  Hardwar Provide Quanti: 3 1	re Groe each	Dup No. 03E  In SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  UP No. 03F  In SGL door(s) with the Description  HINGE  MORTISE CYLINDER	he following:  Model Number  3CB1 4.5 X 4.5 1E74  L9070W 07A LESS CYLINDER 4011 EDA FS436 X 435 SR64  he following:  Model Number  3CB1 4.5 X 4.5 1E74	Finish 652 626 630 689 626 GRY  Finish 652 626 630 689	n Mfgr IVE BES SCH LCN IVE IVE IVE
Hardwa: Provide Quanti:  1 1 1 3  Hardwar Provide Quanti:  3 1 1 1	re Groe each	Dup No. 03E  In SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  UP No. 03F  In SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER	he following:  Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4011 EDA FS436 X 435 SR64  he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER	Finish 652 626 630 689 626 GRY  Finish 652 626 630 689 626	n Mfgr IVE BES SCH IVE IVE IVE IVE SCH IVE BES SCH
Hardwar Provide Quantis 3 1 1 1 3 Hardwar Provide Quantis	re Groe each	Dup No. 03E  O SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER  DOME STOP W/RISER  SILENCER  UP No. 03F  O SGL door(s) with the Description  HINGE  MORTISE CYLINDER  CLASSROOM LOCK  SURFACE CLOSER	he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4011 EDA FS436 X 435 SR64  he following: Model Number  3CB1 4.5 X 4.5 1E74 L9070W 07A LESS CYLINDER 4111 EDA	Finish 652 626 630 689 626 GRY  Finish 652 626 630 689	n Mfgr IVE BES SCH LCN IVE IVE IVE SCH LCN LCN LCN LCN

3	EA	SILENCER	SR64	GRY	IVE
		oup No. 04 h SGL door(s) with t	he following:		
Quanti		Description	Model Number	Finish	Mfgr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	PASSAGE LATCH	L9010P 07A	630	SCH
1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
	e eac	oup No. 04A h SGL door(s) with the Description	he following: Model Number	Finish	ı Mfgr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	PASSAGE LATCH	L9010P 07A	630	SCH
1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
Quanti 6 2 2 2	EA EA EA EA	Description HINGE SGL DUMMY TRIM SURFACE CLOSER SILENCER	Model Number  3CB1 4.5 X 4.5  L0170 07A  4011 EDA  SR64	Finish 652 630 689 GRY	IMfgr IVE SCH LCN IVE
		oup No. 04C			-
Provid Quanti		h PR door(s) with the Description	e following: Model Number	Finish	Mfgr
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
2	EA	SGL DUMMY TRIM	L0170 07A	630	SCH
2	EA	SILENCER	SR64	GRY	IVE
	e eac	oup No. 05 h SGL door(s) with the Description	he following: Model Number	Finish	ıMfqr
3				652	
3 1	EΑ	HINGE	3CB1 4.5 X 4.5	630	IVE
1	EA EA	PRIVACY LOCK MOP PLATE	L9040P 07A XL11-800 8400 4" X 1" LDW	630	SCH IVE
1	EA EA	KICK PLATE	8400 4" X 1" LDW 8400 8" X 2" LDW	630	IVE
1	EA	DOME STOP W/RISER	1010 A 400	626	IVE

3	EA	SILENCER	SR64	GRY	IVE
		oup No. 06	6.11		
Provide Quantit		n SGL door(s) with the Description	e following: Model Number	Finish	n Mfgr
1	EA	INTERMEDIATE PIVOT	7212-INT	626	IVE
1	SET	PIVOTS	7253	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	DEADBOLT LOCK	STOREROOM L460 LESS CYLINDER	630	SCH
1	EA	ROLLER LATCH	RL1152	630	IVE
1	EA	EDGE PULL	BF94	630	ROC
3	EA	SILENCER	SR64	GRY	IVE
	e each	oup No. 07 n PR door(s) with the Description	following: Model Number	Finisl	n Mfgr
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
2	EA	MANUAL FLUSH BOLT	FB458	626	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W O7A LESS CYLINDER	630	SCH
1	EA	SGL DUMMY TRIM	L0170 07A	630	SCH
1	EA	SURFACE CLOSER	4111 EDA	689	LCN
2			SR64	GRY	_
	EA	SILENCER	SK04	GRY	IVE -
Provide	e each	up No. 07A  n PR door(s) with the	following: Model Number	Dimi al	. M£
Quantit	- Y	Description	Model Number	Finish	IMIGI
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	PR	AUTO FLUSH BOLT	FB31P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W O7A LESS CYLINDER	630	SCH
1	EA	COORDINATOR	COR X FL X MB (AS REQUIRED)	628	IVE
2	EA	SURFACE CLOSER	4011 EDA	689	LCN
2	EA	KICK PLATE	8400 8" X 1" LDW	630	IVE
2	EA	SILENCER	SR64	GRY	IVE

Provide	e eac	up No. 07B h PR door(s) with the	following:		
Quantit	СУ	Description	Model Number	Finish	n Mfgr
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	PR	AUTO FLUSH BOLT	FB31P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W O7A LESS CYLINDER	630	SCH
1	EA	COORDINATOR	COR X FL X MB (AS REQUIRED)	628	IVE
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	KICK PLATE	8400 8" X 1" LDW	630	IVE
2	EA	SILENCER	SR64	GRY	IVE
	e eac	up No. 07C h PR door(s) with the Description	following: Model Number	Finisl	n Mfgr
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	PR	AUTO FLUSH BOLT	FB31P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W 807A KNURL LESS CYLINDER	630	SCH
1	EA	COORDINATOR	COR X FL X MB (AS REQUIRED)	628	IVE
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	KICK PLATE	8400 8" X 1" LDW	630	IVE
2	EA	SILENCER	SR64	GRY	IVE
	e eac	up No. 07D h PR door(s) with the Description	following: Model Number	Finisl	- n Mfar
		HINGE	3CB1 4.5 X 4.5		IVE
1	PR	AUTO FLUSH BOLT	FB31P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1 1	EA		L9080W O7A LESS CYLINDER COR X FL X MB (AS REOUIRED)	630 628	SCH
2	EA EA		~ /	689	IVE LCN
2	EA	KICK PLATE		630	IVE
1		ACOUSTIC SEAL		628	ZER
2		AUTO DOOR BOTTOM		626 AL	ZER
۷	ĽА	AUTO DOOK BOTTOM		AЦ	ΔĽK

	e each	oup No. 07E n PR door(s) with the Description	following: Model Number	Finish	n Mfgr
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
2	EA	MANUAL FLUSH BOLT	FB458	626	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W O7A LESS CYLINDER	630	SCH
1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1		PERIMETER SEAL	328A HEAD & JAMBS	628	ZER
2	EA	DOOR SWEEP	339A	AL	ZER
	e each	up No. 07F n PR door(s) with the Description	following: Model Number	Finish	- n Mfgr
6	EΑ	HINGE	3CB1 4.5 X 4.5	652	IVE
1	SET	CONST LATCHING BOLT	FB51P	626	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EΑ	MORTISE CYLINDER	1E74	626	BES
1	EΑ	STOREROOM LOCK	L9080W O7A LESS CYLINDER	630	SCH
1	EΑ	COORDINATOR	COR X FL X MB (AS REQUIRED)	628	IVE
2	EΑ	SURFACE CLOSER	4011 EDA	689	LCN
2	EΑ	KICK PLATE	8400 8" X 1" LDW	630	IVE
2	EA	SILENCER	SR64	GRY	IVE
	e each	up No. 07G n PR door(s) with the Description	following: Model Number	Finish	n Mfgr
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	PR	AUTO FLUSH BOLT	FB31P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W O7A LESS CYLINDER	630	SCH
1	EA	COORDINATOR	COR X FL X MB (AS REQUIRED)	628	IVE
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	KICK PLATE	8400 8" X 1" LDW	630	IVE
1	SET	PERIMETER SEAL	328A (JAMBS) X 428A (HEAD)	628	ZER
2	EA	DOOR SWEEP	339A	AL	ZER

		oup No. 07H h PR door(s) with the	following:		
Quantit		Description	Model Number	Finish	Mfgr
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	PR	AUTO FLUSH BOLT	FB41P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	STOREROOM LOCK	L9080W O7A LESS O/S TRIM LESS	630	SCH
1	EA	COORDINATOR	COR X FL X MB (AS REQUIRED)	628	IVE
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	KICK PLATE	8400 8" X 1" LDW	630	IVE
2	EA	SILENCER	SR64	GRY	IVE
Provide	eac	oup No. 07J h PR door(s) with the Description	following: Model Number	Finish	Mfar
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
2	EA	MANUAL FLUSH BOLT	FB458	626	IVE
1	EΑ	DUST PROOF STRIKE	DP2	626	IVE
2	EΑ	SGL DUMMY TRIM	L0170 07A	630	SCH
1	EA	PASSAGE LATCH	L9010P 07A	630	SCH
2	EA	SILENCER	SR64	GRY	IVE
	eac Y	oup No. 08 VESTIBULE h SGL door(s) with the Description	e following: Model Number	Finish	
_	EA	HINGE	3CB1 4.5 X 4.5 8200 4 X 16	630	IVE
1	EA	PUSH PLATE			IVE
1	EA	PULL PLATE	8302-0 4 X 16	630	IVE
1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1	EA	MOP PLATE	8400 4" X 1" LDW	630	IVE
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

		oup No. 09 h PR door(s) with the	following:		
Quantit	У	Description	Model Number	Finish	n Mfgr
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
2	EA	MANUAL FLUSH BOLT	FB458	626	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	DEADBOLT LOCK	CLASSROOM L463W LESS CYLINDER	626	SCH
2	EA	PULL	DP6111	630	FOR
2	EA	SURFACE CLOSER	4011 EDA	689	LCN
2	EA	KICK PLATE	8400 8" X 1" LDW	630	IVE
2	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
2	EA	SILENCER	SR64	GRY	IVE
					_
_					
		oup No. 10 MEN/WOMEN h SGL door(s) with the			
Quantit			Model Number	Finish	n Mfar
~	-	-			
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	DEADBOLT LOCK	CLASSROOM L463W LESS CYLINDER	626	SCH
1	EA	PUSH PLATE	8200 4 X 16	630	IVE
1	EA	PULL PLATE	8302-0 4 X 16	630	IVE
1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1	EA	MOP PLATE	8400 4" X 1" LDW	630	IVE
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
					_
Hardwar	e Gro	oup No. 11 STAIR			
		h SGL door(s) with the	e following:		
Quantit	У	Description	Model Number	Finish	n Mfgr
3	EA	HINGE	3CB1HW 4.5 X 4.5	652	IVE
1	EA	FIRE EXIT DEVICE	99L-F-BE X 994L-BE X 07A TRIM	626	VON
1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	EA	DOME STOP W/RISER		626	IVE
3	EA	SILENCER	SR64	GRY	IVE
-					

		up No. 11A STAIR h SGL door(s) with the	e following:		
Quantit	-Y	Description	Model Number	Finish	n Mfgr
3	EA	HINGE	3CB1HW 4.5 X 4.5	652	IVE
1	EA	FIRE EXIT DEVICE	99L-F-BE X 994L-BE X 07A TRIM	626	VON
1	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
	e eac	up No. 12 STAIR h PR door(s) with the Description	following: Model Number	Finish	n Mfgr
6	EA	HINGE	3CB1HW 4.5 X 4.5	652	IVE
2	EA	FIRE EXIT DEVICE	9927-L-F-BE X 994L-BE X 07A X LBR	626	VON
2	EA	SURFACE CLOSER	4011 EDA	689	LCN
2	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
2	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
2	EA	SILENCER	SR64	GRY	IVE
	E each	oup No. 13 h PR door(s) with the Description HINGE FIRE EXIT DEVICE SURFACE CLOSER KICK PLATE DOME STOP W/RISER MAGNETIC HOLD-OPEN SILENCER	following: Model Number  3CB1HW 4.5 X 4.5  9947-L-F-BE X 994L-BE X 07A X LBR  4011 EDA  8400 8" X 2" LDW  FS436 X 435  SEM 7850 24V  SR64	Finish 652 626 689 630 626 AL GRY	IVE VON LCN IVE IVE LCN
Provide Quantit  6 2 2 2 2 2 2 Hardwar Provide Quantit  6 2 2	EA E	h PR door(s) with the Description  HINGE FIRE EXIT DEVICE SURFACE CLOSER KICK PLATE DOME STOP W/RISER MAGNETIC HOLD-OPEN SILENCER  OUP No. 14 DOUBLE EGH h PR door(s) with the Description  HINGE FIRE EXIT DEVICE SURFACE CLOSER	Model Number  3CB1HW 4.5 X 4.5  9947-L-F-BE X 994L-BE X 07A X LBR  4011 EDA  8400 8" X 2" LDW  FS436 X 435  SEM 7850 24V  SR64  RESS DOOR  following: Model Number  3CB1HW 4.5 X 4.5  9947-L-F-BE X 994L-BE X 07A X LBR  4010T DE	652 626 689 630 626 AL GRY Finish 652 626 689	IVE VON LCN IVE LCN IVE LCN IVE LCN LCN LCN
Provide Quantit  6 2 2 2 2 2 2 Hardwar Provide Quantit  6 2 2 2 2	EA E	h PR door(s) with the Description  HINGE FIRE EXIT DEVICE SURFACE CLOSER KICK PLATE DOME STOP W/RISER MAGNETIC HOLD-OPEN SILENCER  OUP No. 14 DOUBLE EGH h PR door(s) with the Description  HINGE FIRE EXIT DEVICE SURFACE CLOSER KICK PLATE	Model Number  3CB1HW 4.5 X 4.5  9947-L-F-BE X 994L-BE X 07A X LBR  4011 EDA  8400 8" X 2" LDW  FS436 X 435  SEM 7850 24V  SR64  RESS DOOR  following: Model Number  3CB1HW 4.5 X 4.5  9947-L-F-BE X 994L-BE X 07A X LBR  4010T DE  8400 8" X 2" LDW	652 626 689 630 626 AL GRY Finish 652 626 689 630	IVE VON LCN IVE LCN IVE  1 VE LCN IVE LCN IVE LCN IVE
Provide Quantit  6 2 2 2 2 2 2 Hardwar Provide Quantit  6 2 2	EA E	h PR door(s) with the Description  HINGE FIRE EXIT DEVICE SURFACE CLOSER KICK PLATE DOME STOP W/RISER MAGNETIC HOLD-OPEN SILENCER  OUP No. 14 DOUBLE EGH h PR door(s) with the Description  HINGE FIRE EXIT DEVICE SURFACE CLOSER	Model Number  3CB1HW 4.5 X 4.5  9947-L-F-BE X 994L-BE X 07A X LBR  4011 EDA  8400 8" X 2" LDW  FS436 X 435  SEM 7850 24V  SR64  RESS DOOR  following: Model Number  3CB1HW 4.5 X 4.5  9947-L-F-BE X 994L-BE X 07A X LBR  4010T DE  8400 8" X 2" LDW	652 626 689 630 626 AL GRY Finish 652 626 689	IVE VON LCN IVE LCN IVE LCN IVE LCN LCN LCN

2	EA	SILENCER	SR64	GRY	IVE
	e eac	oup No. 15 h SGL door(s) with the Description	e following: Model Number	Finish	n Mfgr
	_		20D1III 4 F X 4 F		
3 1	EA	HINGE	3CB1HW 4.5 X 4.5 99L-F X 994L X 07A TRIM	652 626	IVE
1	EA EA	FIRE EXIT DEVICE RIM CYLINDER	IE72	626	VON SCH
1		SURFACE CLOSER	4111 EDA	689	LCN
	EA			630	_
1	EA	KICK PLATE	8400 8" X 2" LDW		IVE
1	EA EA	DOME STOP W/RISER SILENCER	FS436 X 435 SR64	626 GRY	IVE IVE
Provid Quanti	e eac ty	oup No. 16 h SGL door(s) with the Description	Model Number	Finish	
3	EA	HINGE	3CB1HW 4.5 X 4.5	652	IVE
1	EA	PANIC DEVICE	99L-BE X 994L-BE X 07A TRIM	626	VON
1	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE -
	e eac	oup No. 17 h PR door(s) with the Description	following: Model Number	Finisł	ı Mfgr
6	EA	HINGE	3CB1HW 4.5 X 4.5	652	IVE
2	EA	PULL	DP6111	630	FOR
2	EA		IE72		SCH
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
2	EA	DOME STOP W/RISER		626	IVE
2	EA	SILENCER	SR64	GRY	IVE
	e eac	oup No. 18 h PR door(s) with the Description	following: Model Number	Finish	- n Mfgr
6	EA	HINGE	3CB1HW 4.5 X 4.5	652	IVE
2	EA	FIRE EXIT DEVICE	9947-L-F X 994L X 07A TRIM	626	VON
2	EA	RIM CYLINDER	IE72	626	SCH
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE

2	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
2	EA	SILENCER	SR64	GRY	IVE
		up No. 18A			
		n PR door(s) with the	5	1	
Quanti	ty	Description	Model Number	Finish	n Migr
6	EA	HINGE	3CB1HW 4.5 X 4.5	652	IVE
2	EA	FIRE EXIT DEVICE	9947-L-F X 994L X 07A TRIM	626	VON
2	EA	RIM CYLINDER	IE72	626	SCH
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
2	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
1	SET	PERIMETER SEAL	328A HEAD & JAMBS	628	ZER
2	EA	DOOR SWEEP	339A	AL	ZER
Hardwar	re Gro	up No. 19			-
		n PR door(s) with the	following:		
Quanti	ty	Description	Model Number	Finish	n Mfgr
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	PR	AUTO FLUSH BOLT	FB31P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	CLASSROOM LOCK	L9070W 07A LESS CYLINDER	630	SCH
1	EA	COORDINATOR	COR X FL X MB (AS REQUIRED)	628	IVE
2	EA	SURFACE CLOSER	4011 EDA	689	LCN
2	EA	KICK PLATE	8400 8" X 1" LDW	630	IVE
2	EA	SILENCER	SR64	GRY	IVE
					-
		up No. 19A	£-11		
Quanti		n PR door(s) with the Description	Model Number	Finish	n Mfgr
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	PR	AUTO FLUSH BOLT	FB31P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	CLASSROOM LOCK	L9070W 07A LESS CYLINDER	630	SCH
1	EA	COORDINATOR	COR X FL X MB (AS REQUIRED)	628	IVE
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	SET	ACOUSTIC SEAL	475A HEAD & JAMBS	628	ZER
2	EA	AUTO DOOR BOTTOM	365	AL	ZER
2	EA	KICK PLATE	8400 8" X 1" LDW	630	IVE
2	EA	SILENCER	SR64	GRY	IVE
				- <del>-</del>	

		up No. 20 STAIR n SGL door(s) with the			
Quantit	У	Description	Model Number	Finis	n Mfgr
3	EA	HINGE	3CB1HW 4.5 X 4.5	652	IVE
1	EA	FIRE EXIT DEVICE	99EO-F	626	VON
1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
	e each	oup No. 21 n PR door(s) with the Description	following: Model Number	Finisl	- n Mfar
	_				
6	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	652	IVE
2	EA	PANIC DEVICE	CD9927-NL-OP	626	VON
2	EA	MORTISE CYLINDER	1E74	626	BES
2	EA	PULL	DP6111	630	FOR
2	EA	RIM CYLINDER	IE72	626	SCH
2	EA	SURFACE CLOSER	4020	689	LCN
2	EA	OVERHEAD STOP	100S	630	GLY
1	SET	ACOUSTIC SEAL	475A HEAD & JAMBS	628	ZER
2	EA	AUTO DOOR BOTTOM	365	AL	ZER
	e eacl	up No. 21A n PR door(s) with the Description	following: Model Number	Finisl	n Mfgr
6	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	652	IVE
2	EA	PANIC DEVICE	CD9927-NL-OP	626	VON
2	EA	MORTISE CYLINDER	1E74	626	BES
2	EA	PULL	DP6111	630	FOR
2	EA	RIM CYLINDER	IE72	626	SCH
2	EA	SURFACE CLOSER	4011 EDA X ST1544	689	LCN
2	EA	OVERHEAD STOP	100S	630	GLY
1		ACOUSTIC SEAL	475A HEAD & JAMBS	628	ZER
2		AUTO DOOR BOTTOM	365	AL	ZER
_					

		oup No. EX-01 n PR door(s) with the	e following:		
Quantit	ΣY	Description	Model Number	Finish	n Mfgr
6	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	630	IVE
2	EA	PANIC DEVICE	CD9947WDC-NL-OP X LBR	626	VON
2	EA	MORTISE CYLINDER	1E74	626	BES
2	EA	PULL	DP6111	630	FOR
2	EA	RIM CYLINDER	IE72	626	SCH
2	EA	SURFACE CLOSER	4111 EDA CUSH	689	LCN
2	EA	OVERHEAD STOP	100S	630	GLY
2	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	SET	PERIMETER SEAL	328A (JAMBS) X 428A (HEAD)	628	ZER
2	EA	DOOR SWEEP	339A	AL	ZER
	e eacl	up No. EX-02 n SGL door(s) with th Description	ne following: Model Number	Finish	- n Mfgr
3	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	PANIC DEVICE	99 EO	626	VON
1	EA	SURFACE CLOSER	4111 EDA CUSH	689	LCN
1	EA	OVERHEAD STOP	100S	630	GLY
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	SET	PERIMETER SEAL	328A (JAMBS) X 428A (HEAD)	628	ZER
1	EA	DOOR SWEEP	339A	AL	ZER
Provide Quantit	e eacl Cy	up No. EX-03 n PR door(s) with the Description	Model Number	Finish	_
6	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	630	IVE
2	EA	MANUAL FLUSH BOLT	FB458	626	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER		626	BES
1	EA	STOREROOM LOCK		630	SCH
1	EA	SGL DUMMY TRIM	L0170 07A	630	SCH
2	EA	SURFACE CLOSER	4111 EDA CUSH	689	LCN
2	EA	OVERHEAD STOP	100S	630	GLY
2	EA	KICK PLATE		630	IVE
1	SET	PERIMETER SEAL	328A HEAD & JAMBS	628	ZER
2	EA	DOOR SWEEP	339A	AL	ZER

		oup No. EX-04 n PR door(s) with the	following:		
Quantit		Description	Model Number	Finish	n Mfgr
6	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	630	IVE
2	EA	PANIC DEVICE	CD9927-NL-OP X LBR	626	VON
2	EA	MORTISE CYLINDER	1E74	626	BES
2	EA	PULL	DP6111	630	FOR
2	EA	RIM CYLINDER	IE72	626	SCH
2	EA	SURFACE CLOSER	4111 EDA CUSH	689	LCN
2	EA	OVERHEAD STOP	100S	630	GLY
2	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
2	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
1	SET	PERIMETER SEAL	328A (JAMBS) X 428A (HEAD)	628	ZER
2	EA	DOOR SWEEP	339A	AL	ZER
	e eacl Cy	oup No. EX-05  n PR door(s) with the Description  HINGE  MORTISE CYLINDER	following: Model Number  3CB1HW 4.5 X 4.5 NRP	Finish 630 626	n Mfgr IVE BES
1	EA	STOREROOM LOCK	L9080W O7A LESS CYLINDER	630	SCH
2	EA	SURFACE CLOSER	4111 EDA CUSH	689	LCN
2	EA	OVERHEAD STOP	1008	630	GLY
2	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
2	EA	DOME STOP W/RISER		626	IVE
1		PERIMETER SEAL	328A (JAMBS) X 428A (HEAD)	628	ZER
2	EA	DOOR SWEEP	339A	AL	ZER
	e eacl	n SGL door(s) with th	DER- SECURITY HW ( CR,LS,PS) e following: Model Number	Finish	n Mfgr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	ELECTRIC LOCK	RX-L9080WEU 07A FAIL SECURE LESS	630	SCH
1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

	e eac	oup No. S01A CARD RE h SGL door(s) with th Description	EADER- SECURITY HW ( CR, LS,PS) ne following: Model Number	Finish	. Mf cre
Qualiti	СУ	Description	Model Number	FIIIISI	IMIGI
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	ELECTRIC LOCK	RX-L9080WEU 07A FAIL SECURE LESS	630	SCH
1	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
Provide Quantit	e each ty EA EA	h SGL door(s) with th Description HINGE POWER TRANSFER	Model Number  3CB1 4.5 X 4.5  EPT10	Finish 652 689	IVE VON
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	ELECTRIC LOCK	RX-L9080WEU 07A FAIL SECURE LESS	630	SCH
1	EA	SURFACE CLOSER	4111 EDA CUSH	689	LCN
1	EA 	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
	e eac	oup No. S01C CARD RE h SGL door(s) with th Description	CADER- SECURITY HW ( CR,LS,PS) ne following: Model Number	Finish	n Mfgr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1					
	EA	POWER TRANSFER	EPT10	689	VON
1	EA EA	POWER TRANSFER MORTISE CYLINDER	EPT10 1E74	689 626	VON BES
1 1					
	EA	MORTISE CYLINDER	1E74	626	BES
1	EA EA	MORTISE CYLINDER ELECTRIC LOCK	1E74 RX-L9080WEU 07A FAIL SECURE LESS	626 630	BES SCH

AL ZER

1 EA AUTO DOOR BOTTOM 365

Provide	e each	SGL door(s) with the	_		_
Quantity Description		Description	Model Number	Finish	n Migr
3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	ELECTRIC LOCK	RX-L9080WEU 07A FAIL SECURE LESS	630	SCH
1	EA	SURFACE CLOSER	4020	689	LCN
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
1	SET	ACOUSTIC SEAL	475A HEAD & JAMBS	628	ZER
1	EA	AUTO DOOR BOTTOM	365	AL	ZER
	e each	oup No. S02 CARD READ PR door(s) with the Description	DER- SECURITY HW ( CR,LS,DS) following: Model Number	Finisl	n Mfgr
6	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	652	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
2	EA	FIRE EXIT DEVICE	RX-EL9947L-F X 994L X 07A TRIM 24VDC	626	VON
2	EA	RIM CYLINDER	IE72	626	SCH
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	DOME STOP W/RISER		626	IVE
2	EA	SILENCER	SR64	GRY	IVE
1	EA	POWER SUPPLY	PS873-2 SERIES	GRY	VON
					_
		oup No. S02A CARD RE n PR door(s) with the	ADER- SECURITY HW ( CR,LS,DS) following:		
Quantit	У	Description	Model Number	Finish	n Mfgr
6	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	652	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
2	EA	FIRE EXIT DEVICE	RX-EL9947L-F X 994L X 07A TRIM 24VDC	626	VON
2	EA	RIM CYLINDER	IE72	626	SCH
2	EA	SURFACE CLOSER	4020	689	LCN
2	EA	OVERHEAD STOP	100S	630	GLY
1	SET	ACOUSTIC SEAL	475A HEAD & JAMBS	628	ZER
2	EA	AUTO DOOR BOTTOM	365	AL	ZER
1	EA	POWER SUPPLY	PS873-2 SERIES	GRY	VON

		oup No. S02B CARD RE h PR door(s) with the	ADER- SECURITY HW ( CR,LS,DS)		
Quantity Description			Model Number	Finish	n Mfgr
6	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	652	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
2	EA	PANIC DEVICE	RX-EL9927NL-OP X 24VDC	626	VON
2	EA	PULL	DP6111	630	FOR
2	EA	RIM CYLINDER	IE72	626	SCH
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	OVERHEAD STOP	100S	630	GLY
1	SET	ACOUSTIC SEAL	475A HEAD & JAMBS	628	ZER
2	EA	AUTO DOOR BOTTOM	365	AL	ZER
1	EA	POWER SUPPLY	PS873-2 SERIES	GRY	VON
					_
TT = d		our No GOO GADD DEA			
		oup No. SU3 CARD REA h PR door(s) with the	DER- SECURITY HW ( CR, LS,DS) PR DR		
Quantit		Description	Model Number	Finis	n Mfgr
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	PR	AUTO FLUSH BOLT	FB31P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	ELECTRIC LOCK	RX-L9080WEU 07A FAIL SECURE LESS	630	SCH
1	EA	COORDINATOR	COR X FL X MB (AS REQUIRED)	628	IVE
2	EA	SURFACE CLOSER	4011 EDA	689	LCN
2	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
					_
		<del>-</del>	ADER- SECURITY HW ( CR, LS,DS) PR DR		
Quantit		h PR door(s) with the Description	following: Model Number	Finis	n Mfar
Quarrer	- Y	_			I MIGI
6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	PR	AUTO FLUSH BOLT	FB31P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA		RX-L9080WEU 07A FAIL SECURE LESS	630	SCH
1	EA		COR X FL X MB (AS REQUIRED)	628	IVE
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	DOME STOP W/RISER	FS436 X 435	626	IVE

Hardware Group No. S03B CARD READER- SECURITY HW ( CR, LS, DS) PR DR Provide each PR door(s) with the following:

Quantity		Y	Description	Model Number	Finish	n Mfgr
	6	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
	1	EA	POWER TRANSFER	EPT10	689	VON
	1	PR	AUTO FLUSH BOLT	FB31P	630	IVE
	1	EA	DUST PROOF STRIKE	DP2	626	IVE
	1	EA	MORTISE CYLINDER	1E74	626	BES
	1	EA	ELECTRIC LOCK	RX-L9080WEU 07A FAIL SECURE LESS	630	SCH
	1	EA	COORDINATOR	COR X FL X MB (AS REQUIRED)	628	IVE
	2	EA	SURFACE CLOSER	4111 EDA	689	LCN
	2	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
	1	SET	PERIMETER SEAL	328A (JAMBS) X 428A (HEAD)	628	ZER
	2	EA	DOOR SWEEP	339A	AL	ZER

Hardware Group No. S04 CARD READER- SECURITY HW ( CR,LS,DS) Provide each PR door(s) with the following:

Quantity		Description Model Number		Finish Mfgr	
6	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	652	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
2	EA	PANIC DEVICE	RX-EL9927NL-OP X 24VDC	626	VON
2	EA	PULL	DP6111	630	FOR
2	EA	RIM CYLINDER	IE72	626	SCH
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	SET	ACOUSTIC SEAL	475A HEAD & JAMBS	628	ZER
2	EA	AUTO DOOR BOTTOM	365	AL	ZER
2	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
2	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
2	EA	SILENCER	SR64	GRY	IVE
1	EA	POWER SUPPLY	PS873-2 SERIES	GRY	VON

Hardware Group No. S04A CARD READER- SECURITY HW ( CR,LS,DS)

Provide each PR door(s) with the following:

Quantity	Description Model Number		Finish Mfgr	
6 EA	HINGE	3CB1HW 4.5 X 4.5 NRP	652	IVE
2 EA	POWER TRANSFER	EPT10	689	VON
2 EA	PANIC DEVICE	CD9927-NL-OP X LBR	626	VON
2 EA	MORTISE CYLINDER	1E74	626	BES
2 EA	PULL	DP6111	630	FOR
2 EA	RIM CYLINDER	IE72	626	SCH
2 EA	SURFACE CLOSER	4111 EDA CUSH	689	LCN
1 SET	ACOUSTIC SEAL	475A HEAD & JAMBS	628	ZER
2 EA	AUTO DOOR BOTTOM	365	AL	ZER
2 EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
2 EA	DOME STOP W/RISER	FS436 X 435	626	IVE
2 EA	SILENCER	SR64	GRY	IVE
1 EA	POWER SUPPLY	PS873-2 SERIES	GRY	VON

Hardware Group No. S05 CARD READER- SECURITY HW (DELAYED EGRESS) Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish Mfgr	
3	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	FIRE EXIT DEVICE	CX-99L-F X 994L X 07A TRIM 24VDC	626	VON
1	EA	MORTISE CYLINDER	1E74- 1 1/4" LENGTH	626	SCH
1	EA	RIM CYLINDER	IE72	626	SCH
1	EA	SURFACE CLOSER	4011 EDA	689	LCN
1	EA	DOME STOP W/RISER	FS436 X 435	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
1	EA	POWER SUPPLY	PS871SERIES	GRY	VON
1	EA	ELECTRONIC HORN	1910-1 ( 24VDC)	WHT	LOC

NOTE: PANIC DEVICE EQUIPPED WITH LOCAL ALARM AND 15-SECOND DELAY.

KEY ACCESS BYPASSES ALARM AND DELAY. DEVICE TIED TO FIRE ALARM SYSTEM.

IN THE EVENT OF AN EMERGENCY, POWER IS DISCONNECTED AND FREE EXIT IS PERMITTED.

Hardware Group No. S06 CARD READER- SECURITY HW ( CR,LS,DS) Provide each PR door(s) with the following:

	FIOVIGE	Caci	I FR GOOL(S) WICH CHE	ioliowing.		
Quantity		7	Description	Model Number	Finish Mfgr	
	6	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	630	IVE
	2	EA	POWER TRANSFER	EPT10	689	VON
	2	EA	PANIC DEVICE	RX-EL9927NL-OP X 24VDC	626	VON
	2	EA	MORTISE CYLINDER	1E74	626	BES
	2	EA	PULL	DP6111	630	FOR
	2	EA	RIM CYLINDER	IE72	626	SCH
	2	EA	SURFACE CLOSER	4111 EDA CUSH	689	LCN
	2	EA	OVERHEAD STOP	100S	630	GLY
	1	SET	PERIMETER SEAL	328A (JAMBS) X 428A (HEAD)	628	ZER
	2	EA	DOOR SWEEP	339A	AL	ZER
	1	EA	POWER SUPPLY	PS873-2 SERIES	GRY	VON

End of Hardware Schedule

#### APPENDIX "A"

### ARCHITECTURAL LIGHTING FIXTURE SCHEDULE

### Notes:

- 1. Complete specification includes fixture schedule, fixture cuts and general fixture specification.
- 2. Multiple manufacturers are listed wherever possible. Where an equivalent manufacturer does not exist, alternate fixtures are listed. Alternate manufacturers are listed for competitive bidding. These alternates may vary in performance or appearance.

F1 Description: Surface mounted 19"Ø x 11" H compact fluorescent

downlight with a 11.5" Ø opal glass diffuser, white finish, reflector and integral electronic ballast

mounted in canopy.

Manufacturers: Delray Lighting Inc., #2295-W-O-32-2-E

Prisma, # Optalux 28C-Frosted-32CF-277V

Mounting Type: Gypsum Board Ceiling.

Remarks: Contractor to provide all necessary hardware for

proper installation. Contractor to verify and coordinate fixture trim with ceiling details, refer to architectural plans and details. Fixtures to fit

flush with ceiling plane with no visible gaps.

Location: Typical Corridor

Supply: 277V

Lamp: (1) PLT-32/835/4P/ALTO, (Philips)

F1A <u>Description</u>: Similar to type "F1" except, mounted in an acoustical

ceiling tile.

Manufacturers: Delray Lighting Inc., #2295-W-O-32-2-E

Prisma, # Optalux 28C-Frosted-32CF-277V

Mounting Type: Acoustic Ceiling Tile System.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixtures to fit flush with ceiling plane

with no visible gaps

Location: Break Room

Supply: 277V

Lamp: (1) PLT-32/835/4P/ALTO, (Philips)

F1B Description: Similar to type "F1" except, with a 120V ballast.

Manufacturers: Delray Lighting Inc., #2295-W-O-32-1-E
Prisma, # Optalux 28C-Frosted-32CF-120V

Mounting Type: Gypsum Board Ceiling.

Remarks: Contractor to provide all necessary hardware for

proper installation. Contractor to verify and coordinate fixture trim with ceiling details, refer to architectural plans and details. Fixtures to fit

flush with ceiling plane with no visible gaps.

Location: Typical Corridor

Supply: 120V

Lamp: (1) PLT-32/835/4P/ALTO, (Philips)

F2 Description: Cable pendant mounted nominal, 10 ½"W x 2 ¼"H linear

fluorescent indirect/direct fixture with (3) T8 lamps in cross-section, one piece die formed housing, perforated diffuser slots, symmetric reflector and

integral electronic ballast(s).

Manufacturers: Zumtobel, #EG-3328-X-W-20-U-C1/J5-F3/CBL070-J5-

F3/CBL070-S2/EC-W

Focal Point, # FV25-3T8-1C-277-E-C48-TBD-XX-XX-XX

Linear, # C210P1-3T8-PRD-BW-277-XX Neoray, # 210IP-P-3T8-277-XX-A-XX-XX

Mounting Type: Acoustic Ceiling Tile System

Remarks: Contractor is to coordinate fixture lengths with

architectural drawings for continuous run conditions. Contractor to coordinate all power feed locations. 18" minimum suspension Length required. Architect to verify actual suspension length. Provide all necessary hardware for a complete working system. Contractor to verify and coordinate fixture trim with ceiling details, refer to architectural plans and details. Fixture canopies to fit flush with ceiling

plane with no visible gaps

Location: Offices & Classrooms

Supply: 277V

Lamp: (3) F32T8/ADV835/ALTO, (Philips)

Bid Notes: Provide shop drawings for review and approval of all

row lengths and power feed conditions.

F2D Description: Same as Fixture Type F2, exception with 120V HI LUME

dimming ballast.

Manufacturers: Zumtobel, #EG-3328-X-W-20-4(HI-LUME)-C1/J5-F3/CBL070-

J5-F3/CBL070-S2/EC-W

Focal Point, # FV25-3T8-1C-120-D-C48-TBD-XX-XX-XX

Linear, # C21OP1-3T8-PRD-BW-120-XX-DIM
Neoray, # 201IP-P-3T8-120-DIM-A-XX-XX

Mounting Type: Acoustic Ceiling Tile System

Remarks: Contractor is to coordinate fixture lengths with

architectural drawings for continuous run conditions. Contractor to coordinate all power feed locations. 18" minimum suspension length required. Architect to verify and coordinate suspension length. Provide wall box dimmer as required. Provide all necessary hardware for a complete working system. Contractor to verify and coordinate fixture trim with ceiling details, refer to architectural plans and details. Fixture canopies to fit flush with ceiling plane with

no visible gaps.

Location: Offices & Classrooms

Supply: 120V

Lamp: (3) F32T8/ADV835/ALTO, (Philips)

Bid Notes: Provide shop drawings for review and approval of all

row lengths and power feed conditions.

F3 <u>Description</u>: Recessed incandescent low voltage downlight nominal 4"

diameter white face plate with 2" open aperture, regressed smooth white cone, frosted glass lens and 3 %" D x 15" W x 9 %" L, housing with integral

transformer.

Manufacturers: USA Illumination, Inc., # 325NC/9349/9143

RSA, # LX3001-WH-White Baffle-277V

Mounting Type: Gypsum Board Ceiling and Acoustical Ceiling.

Contractor to verify.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixture trim to sit flush with ceiling plane

with no visible gaps

Location: Offices, Classrooms Circulation Areas.

Supply: 277/12V

Lamp: (1) 50mr16/IR/WF60, (OSRAM SYLVANIA)

F3A Description: Same as F3, except fixture shall be 120V and have

satin nickel trim finish.

Manufacturers: USA Illumination, Inc., # 325NC/9349/9143/99

RSA, # LX3001-Satin Nickel-Baffle-120V

Mounting Type: Gypsum Board Ceiling and Acoustical Ceilings.

Contractor to verify.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixture trim to sit flush with ceiling plane

with no visible gaps. Architect to verify finish.

<u>Location</u>: West Point Room

Supply: 120/12V

<u>Lamp</u>: (1) 50mr16/IR/WF60, (OSRAM SYLVANIA)

F3B Description: Same as F3, except different mounting location and bid

conditions.

Manufacturers: USA Illumination, Inc., # 325NC/9349/9143

RSA, # LX3001-WH-White Baffle-277V

Mounting Type: Millwork Conditions.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixture trim to sit flush with ceiling plane

with no visible gaps

<u>Location</u>: West Point Room display cases.

Supply: 277/12V

Lamp: (1) 50mr16/IR/WF60, (OSRAM SYLVANIA)

Bid Notes: Pertains to Bid Option #9 only.

F3D <u>Description</u>: Same as F3, except fixture shall be 120V.

Manufacturers: USA Illumination, Inc., # 325NC/9349/9143

RSA, # LX3001-WH-White Baffle-120V

Mounting Type: Gypsum Board Ceiling and Acoustical Ceilings.

Contractor to verify.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixture trim to fit flush with ceiling plane

with no visible gaps

Location: Offices & Classrooms

Supply: 120V/12V

Lamp: (1) 50mr16/IR/WF60, (OSRAM SYLVANIA)

F3EM Description: Same as fixture type F3, except remote emergency

battery backup

Manufacturers: USA Illumination, Inc., # 325NC/9349/9143

RSA, # LX3001-WH-White Baffle-277V

Battery Pack: Atlite

Mounting Type: Gypsum Board Ceiling and Acoustical Ceilings.

Contractor to verify.

Remarks: Contractor to size battery backpack to accommodate all

of the F3 emergency fixtures within a given area. Battery pack and Test switch shall be in a remote accessible location. Contractor to verify and coordinate fixture trim with ceiling details, refer to architectural plans and details. Fixtures to fit

flush with ceiling plane with no visible gaps

Location: Archive Building

Supply: 277/12V

Lamp: (1) 50mr16/IR/WF60, (OSRAM SYLVANIA)

F4 Description: Under cabinet mounted 1 3/16"H x 5 5/16"D single lamp

T8 fluorescent strip light with white housing, acrylic

lens and integral ballast

Manufacturers: Army Corp of Engineers Type FF1

Mounting Type: Millwork upper cabinets. Contractor is to coordinate

mounting details, refer to architectural plans and

details.

Remarks: Fixtures to be controlled by an on/off toggle switch.

Contractor is to determine fixture lengths for continuous run coverage. Contractor is to coordinate placement of fixtures so that end of runs come within 6" of the end of cabinet and center within the overall length of the millwork. Use 4'-0" lengths wherever possible. Provide all necessary hardware for a

complete working system.

Location: Offices, Pantry and Copy areas

Supply: 277V

Lamp: (1) F32T8/ADV835/ALTO, (Philips)

F5 Description: Cable mounted pendant nominal,  $5"W \times 6"H$  continuous

linear fluorescent direct fixture with (2) T8 lamps in cross-section, one piece die formed trunk, V-shaped perforated diffuser with solid cross blades, die cast

end caps and integral electronic ballast(s).

Manufacturers: Zumtobel, ZX-XDL-N2/32-X-U-C

Mounting Type: Pendant Mounted to concrete ceiling or Acoustical

Ceiling. Mounting height 9'-0" AFF to bottom of

fixture.

Remarks: Contractor is to coordinate fixture lengths with

architectural drawings for continuous run conditions. Fixture trunk shall be longer than the lighting component as required to allow for fixture to mount to the structural beam. Contractor to verify and coordinate all mounting and power feed locations. Provide all necessary hardware for a complete working

Location:

system. Contractor to verify and coordinate fixture trim with ceiling details, refer to architectural plans and details. Fixtures to fit flush with ceiling plane with no visible gaps. Contractor shall readjust all louver blades to be perpendicular to floor

as required, post installation. Library Stacks and Reading Areas

Supply: 277V

Lamp: (2) F32T8/ADV835/ALTO, (Philips)

Bid Notes: Provide shop drawings for review and approval of all

row lengths and power feed conditions.

F5D <u>Description</u>: Same as Fixture "F5", except with integral 120V Hi-

Lume dimming ballast.

Manufacturers: Zumtobel, ZX-XDL-N2/32-X-U-X-DM(Hi Lume)

Mounting Type: Pendant Mounted to concrete ceiling or Acoustical

Ceiling. Mounting height 9'-0" AFF to bottom of

fixture.

Remarks: Contractor is to coordinate fixture lengths with

architectural drawings for continuous run conditions. Provide all necessary hardware for a complete working system. Contractor to verify and coordinate fixture trim with ceiling details, refer to architectural plans and details. Fixtures to fit flush with ceiling plane with no visible gaps. Contractor shall readjust all louver blades to be perpendicular to floor

as required.

Location: Reading Areas and Conference Rooms

Supply: 120V

Lamp: (2) F32T8/ADV835/ALTO, (Philips)

Bid Notes: Provide shop drawings for review and approval of all

row lengths and power feed conditions.

F6 Description: Surface mounted single lamp compact fluorescent

downlight, with 7" diameter x 11"H sand blasted opal glass diffuser, painted hammertone steel canopy, and

ballast located in the junction box.

Manufacturers: Delray, # 2345/H/O/26/2/E/exterior sandblasted

Prisma, # Optalux 19C-Frosted-26CF

<u>Mounting Type</u>: Surface mounted to exposed ceiling.

Remarks: Fixtures to fit flush with surface plane with no

visible gaps.

<u>Location</u>: Library Stack Corridors

Supply: 277V

Lamp: (1) PL-T 26W/835/4P/ALTO, (Philips)

Bid Notes:

F6A Description: Pendant cable mounted single lamp compact fluorescent

downlight, with 7" diameter x 11"H sand blasted opal glass diffuser, painted hammertone steel canopy, and

ballast located in the junction box.

Manufacturers: Delray, # 2345/H/O/26/2/E/exterior sandblasted

Prisma, # Optalux 19C-Frosted-26CF

Mounting Type: Mounted to signage above Circulation/Reference desks.

Remarks: Location: Circulation and Reference desks.

Supply: 277V

Lamp:
Bid Notes:
(1) PL-T 26W/835/4P/ALTO, (Philips)
Pertains to Bid Option #5 only.

F7 Description: Not Used

F8 Description: Cus

Custom or Custom modified surface mounted single lamp compact fluorescent sconce, nominal  $24\,\mathrm{^H}$  x  $4\,\mathrm{^H}$  projection. Cast aluminum sandblasted body painted to match wrought iron, custom lamp and diffuser shield consisting of aluminum arms, decorative grills, sandblasted art glass diffuser and integral electronic ballast

Manufacturers: Baldinger

Hess Rambusch Crenshaw

Mounting Type:
Remarks:

Exterior Wall Condition.

- 1. Manufactures shall price option 1-complete custom and option 2-modified standard with custom components.
- Basis of design: Hess "Riva". Refer to fixture cut sheet drawings E717 and E703-AR for more detailed information regarding the fixture's overall dimensions, components, finishes and Custom modified vs. Custom options.
- 3. Fixtures shall be design build and will continue to develop through the shop drawing process.
- 4. Fixtures to have U.L. Label
- 5. Manufacture to guarantee all metals shall not sag, warp or easily dent. All metals to maintain a straight profile/edge after installation
- 6. All exposed joints to be fully welded and ground smooth with no visible seams.
- 7. All exposed metals to be finished in a faux wrought iron finish (To be reviewed and approved as part of the fabrication process).
- 8. Art glass, acrylics and diffusers to be selected (To be reviewed and approved as part of the fabrication process).
- Manufacturer to provide shop drawings for fixture, which should include all dimensions, materials and lamping.
- 10. Following the approval of shop drawings the owner, architect and lighting designer will review elements of the lighting fixtures as fabrication proceeds including: metal finish diffuser finish, component details (i.e. rosette, finial and canopy). This review is intended to occur at the factory and provide the owner and design team an opportunity to view and approve specific detail elements of the fixture. This process is not intended to delay release for fixture fabrication but allow the owner an opportunity to engage and participate in the fabrication process. All scheduling implication should be clearly noted as the process develops.

- 11.Lighting Designer, Architect and Client will make trips to the factory to review and comment on fixture several times through out the manufacturing process.
- 12. Contractor to coordinate mounting with wall construction details. Fixture canopy to sit flush with wall without any visible gap.
- 13. Manufacturer to provide suggested mounting details and overall fixture weight. Contractor to coordinate and verify that wall structure and support will be adequate to support fixture.

Library Stacks

<u>Location</u>: <u>Supply</u>: Lamp:

<u>apply</u>: 277V

(1) PL-L-18/835, (Philips)

### F8A Description:

Custom or Custom modified surface mounted single lamp compact fluorescent sconce, nominal 6'-0"H x 12" projection. Cast aluminum sandblasted body painted to match wrought iron, custom lamp and diffuser shield consisting of aluminum arms, decorative grills, sandblasted art glass diffuser and integral electronic ballast

Dallast

### Manufacturers: Baldinger

Hess Rambusch Crenshaw

Mounting Type: Remarks:

Exterior Wall Condition.

- 1. Manufactures shall price option 1-complete custom and option 2-modified standard with custom components.
- Basis of design: Hess "Riva". Refer to fixture cut sheet and drawing E718 for more detailed information regarding the fixture's overall dimensions, components, finishes and Custom modified vs. Custom options.
- 3. Fixtures shall be design build and will continue to develop through the shop drawing process.
- 4. Fixtures to have U.L. Label
- 5. Manufacture to guarantee all metals shall not sag, warp or easily dent. All metals to maintain a straight profile/edge after installation
- 6. All exposed joints to be fully welded and ground smooth with no visible seams.
- 7. All exposed metals to be finished in a faux wrought iron finish (To be reviewed and approved as part of the fabrication process).
- Art glass, acrylics and diffusers to be selected (To be reviewed and approved as part of the fabrication process).
- 9. Manufacturer to provide shop drawings for fixture, which should include all dimensions, materials and lamping.
- 10. Following the approval of shop drawings the owner, architect and lighting designer will review elements of the lighting fixtures as fabrication proceeds including: metal finish diffuser finish, component details (i.e. rosette, finial and canopy). This review is intended to occur at the factory and provide the owner and design team an opportunity to view and approve specific detail elements of the fixture. This

process is not intended to delay release for fixture fabrication but allow the owner an opportunity to engage and participate in the fabrication process. All scheduling implication should be clearly noted as the process develops.

- 11.Lighting Designer, Architect and Client will make trips to the factory to review and comment on fixture several times through out the manufacturing process.
- 12.Contractor to coordinate mounting with wall construction details. Fixture canopy to sit flush with wall without any visible gap.
- 13. Manufacturer to provide suggested mounting details and overall fixture weight. Contractor to coordinate and verify that wall structure and support will be adequate to support fixture.

Location: West Point Room Entry and Library Stack Entries

Supply: 277V

Lamp: (1) PL-L-18/835, (Philips)

F8B <u>Description</u>: Same as Fixture "F8A", except with a 120V ballast

<u>Manufacturers</u>: Baldinger

Hess Rambusch Crenshaw

Mounting Type: Wall Condition.

Remarks: All notes for fixture F8A apply

Location: West Point Room

Supply: 120V

<u>Lamp</u>: (1) PL-L-18/835, (Philips)

F9 <u>Description</u>: Exterior Wall surface mounted 6"Ø x 9"H

indirect/direct metal halide sconce with integral

electronic ballast.

Manufacturers: Hess, #Messina 80 MW - 277
Mounting Type: Exterior Trim Condition.

Remarks: Contractor to verify and coordinate fixture trim with

trim details and mounting heights, refer to architectural plans and details. Fixtures to fit

flush with surface plane with no visible gaps

Location: Window Frame

Supply: 277V

Lamp: (2) CDM35/PAR20/M/FL, (Philips)

F10 Description: Pendant cable mounted 7"Ø x 13.5" H compact

fluorescent downlight, with opal glass diffuser frosted on the exterior, electronic ballast located in the junction box . Suspension length to be determined.

Manufacturers: Delray, #2342/H/O/26/277V/Mod-Frost Diffuser Exterior

Prisma, # Optalum 19-26WCF-277V

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details and mounting heights, refer to architectural plans and details. Fixtures to fit

flush with ceiling plane with no visible gaps. Library Stacks and Office Suite Reception Areas Gypsum Board Ceiling Slot and Acoustical Ceilings

Supply: 277V

Location:

Mounting Type:

Lamp: (1) PL-T 26W/835/4P/ALTO, (Philips)

### F11 Description:

4'-0" dia. X 7'-0"H Custom pendant with fluorescent lamping, machined and cast aluminum housing with twisted metal banding, (4) mounting stems and canopy in a wrought iron simulated finish, art glass diffusers with an opal acrylic internal diffuser, and integral dimming ballast(s)

Manufacturers: Baldinger

Rambusch Crenshaw

Mounting Type:
Remarks:

- 1. Refer to drawings E719 and E704-AR for more detailed information regarding the fixture's overall dimensions, components, and finishes.
- 2. Fixtures shall be design build and will continue to develop through the shop drawing process.
- 3. Fixtures to have U.L. Label
- 4. Manufacture to guarantee all metals shall not sag, warp or easily dent. All metals to maintain a straight profile/edge after installation
- 5. All exposed joints to be fully welded and ground smooth with no visible seams.
- 6. All exposed metals to be finished in a faux wrought iron finish (To be reviewed and approved as part of the fabrication process).
- Art glass, acrylics and diffusers to be selected (To be reviewed and approved as part of the fabrication process).
- 8. Manufacturer to provide shop drawings for fixture, which should include all dimensions, materials and lamping.
- 9. Following the approval of shop drawings the owner, architect and lighting designer will review elements of the lighting fixtures as fabrication proceeds including: metal finish diffuser finish, component details (i.e. rosette, finial and canopy). This review is intended to occur at the factory and provide the owner and design team an opportunity to view and approve specific detail elements of the fixture. This process is not intended to delay release for fixture fabrication but allow the owner an opportunity to engage and participate in the fabrication process. All scheduling implication should be clearly noted as the process develops.
- 10.Lighting Designer, Architect and Client will make trips to the factory to review and comment on fixture several times through out the manufacturing process.
- 11. Contractor to coordinate mounting with all ceiling details. Fixture canopy to sit flush with ceiling without any visible gap.
- 12. Manufacturer to provide suggested mounting details and overall fixture weight. Contractor to coordinate and

verify that ceiling structure and support will be

adequate to support fixture. Library Stacks Reading Area

Location:
Supply:

<u>ipply</u>: 277V

Lamp: (8) F32T8/ADV835/ALTO, (Philips)

F11A <u>Description</u>: Similar to fixture type F11, except for smaller in

scale (3'0" dia)

Manufacturers: Baldinger

Rambusch Crenshaw

Mounting Type: Gypsum I

Remarks:

Gypsum Board Ceiling System.

- 1. Refer to drawings E720 and E705-AR for more detailed information regarding the fixture's overall dimensions, components, and finishes.
- 2. Fixtures shall be design build and will continue to develop through the shop drawing process.
- 3. Fixtures to have U.L. Label
- 4. Manufacture to guarantee all metals shall not sag, warp or easily dent. All metals to maintain a straight profile/edge after installation
- 5. All exposed joints to be fully welded and ground smooth with no visible seams.
- 6. All exposed metals to be finished in a faux wrought iron finish (To be reviewed and approved as part of the fabrication process).
- Art glass, acrylics and diffusers to be selected (To be reviewed and approved as part of the fabrication process).
- 8. Manufacturer to provide shop drawings for fixture, which should include all dimensions, materials and lamping.
- 9. Following the approval of shop drawings the owner, architect and lighting designer will review elements of the lighting fixtures as fabrication proceeds including: metal finish diffuser finish, component details (i.e. rosette, finial and canopy). This review is intended to occur at the factory and provide the owner and design team an opportunity to view and approve specific detail elements of the fixture. This process is not intended to delay release for fixture fabrication but allow the owner an opportunity to engage and participate in the fabrication process. All scheduling implication should be clearly noted as the process develops.
- 10.Lighting Designer, Architect and Client will make trips to the factory to review and comment on fixture several times through out the manufacturing process.
- 11.Contractor to coordinate mounting at outlet box location. Fixture canopy to sit flush with ceiling without any visible gap.
- 12. Manufacturer to provide suggested mounting details and overall fixture weight. Contractor to coordinate and verify that ceiling structure and support will be adequate to support fixture.

Location: Archive Building

Supply: 277V

Lamp: (4) PL-L 40W/835/RS/IS, (Philips)

F11B <u>Description</u>: Similar to fixture type F11, except for smaller in

scale (3'0" dia) and surface mounted to ceiling.

<u>Manufacturers</u>: Baldinger

Rambusch Crenshaw

Mounting Type: Gypsum Board Ceiling System.

Remarks:

- 1. Refer to drawings E721 and E706-AR for more detailed information regarding the fixture's overall dimensions, components, and finishes.
- 2. Fixtures shall be design build and will continue to develop through the shop drawing process.
- 3. Fixtures to have U.L. Label
- 4. Manufacture to guarantee all metals shall not sag, warp or easily dent. All metals to maintain a straight profile/edge after installation
- 5. All exposed joints to be fully welded and ground smooth with no visible seams.
- 6. All exposed metals to be finished in a faux wrought iron finish (To be reviewed and approved as part of the fabrication process).
- Art glass, acrylics and diffusers to be selected (To be reviewed and approved as part of the fabrication process).
- 8. Manufacturer to provide shop drawings for fixture, which should include all dimensions, materials and lamping.
- 9. Following the approval of shop drawings the owner, architect and lighting designer will review elements of the lighting fixtures as fabrication proceeds including: metal finish diffuser finish, component details (i.e. rosette, finial and canopy). This review is intended to occur at the factory and provide the owner and design team an opportunity to view and approve specific detail elements of the fixture. This process is not intended to delay release for fixture fabrication but allow the owner an opportunity to engage and participate in the fabrication process. All scheduling implication should be clearly noted as the process develops.
- 10.Lighting Designer, Architect and Client will make trips to the factory to review and comment on fixture several times through out the manufacturing process.
- 11.Contractor to coordinate mounting at outlet box location. Fixture canopy to sit flush with ceiling without any visible gap.
- 12. Manufacturer to provide suggested mounting details and overall fixture weight. Contractor to coordinate and verify that ceiling structure and support will be adequate to support fixture.

Location: Archive Building

Supply: 277V

Lamp: (3) PL-L40/835/RS/IS, (Philips)

F12 Description: Recess mounted 2"Ø LED step light & orientation

luminaire with white LED color and frosted prismatic

glass and remote power supply.

Manufacturers: Erco, # 33864.023

Zumtobel # LDMFW

Mounting Type: Wall Conditions.

Remarks: Power supply should be sized to handle the load for

each floor. Power supply shall be located in a well-ventilated and accessible location. Contractor to verify and coordinate fixture trim with floor and wall details refer to architectural plans and details. Fixtures to fit flush with surface plane with no visible gaps. See attached sketch located with the

fixture cut for mounting height.

Location: Atrium Stair

Supply: 120/12V

Lamp: (1) 5W LED Unit

F13 <u>Description</u>: Recess mounted 2'-0" x 2'-0" X 6"H (3) lamp biax

fluorescent troffer with opal acrylic lens. Army Corps of Engineers, Type RF8 Modified

<u>Manufacturers</u>: Army Corps of Engineers, Type Mounting Type: Acoustic Ceiling Tile System.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixtures to fit flush with ceiling plane

with no visible gaps.

<u>Location</u>: Storage Rooms

Supply: 277V

Lamp: (3) PL-L40/835/RS/IS, (Philips)

F14 Description: Wall surface mounted 9"W x 8"D continuous linear

fluorescent direct slot fixture with a die formed steel housing, telescoping ends, white straight blade continuous louver and integral electronic ballast.

Manufacturers: Army Corps of Engineers, Type SF9

Mounting Type: Acoustical Ceiling Tile

Remarks: Contractor is to coordinate fixture lengths with

architectural drawings for continuous run conditions. Use 4'-0" lengths wherever possible. Provide all necessary hardware for a complete working system. Contractor to verify and coordinate fixture trim with ceiling details, refer to architectural plans and

details.

Location: Toilet Rooms

Supply: 277V

Lamp: (2) F32T8/ADV835/ALTO, (Philips)

<u>Bid Notes:</u> Provide shop drawings for review and approval of all

row lengths and power feed conditions.

F15 NOT USED

F16 NOT USED

F17 Description: Surface mounted 2' x 2' x 14"H single lamp metal

halide floodlight with a die formed aluminum housing, hinged door with prismatic tempered glass, semi specular aluminum reflector, white polyester powder

coat finish and integral ballast.

Manufacturers: Army Corps of Engineers, Type SH1/100W/277/white poly

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixtures to fit flush with ceiling plane

with no visible gaps.

<u>Location</u>: Loading Dock <u>Mounting</u> Type: Surface ceiling

Supply: 277V

Lamp: (1) MHC/C/U/MP/3K, (Philips)

F18 Description: Display illumination integral with display cases.

Manufacturers: See Specification Section 10410, ALUM. DISPLAY CASES

Mounting Type: Millwork Conditions.

Remarks: EC to provide dedicated duplex outlet at each

location.

Location: Aluminum Display Cases

Supply: 120V

Lamp: See FFE package

Bid Notes: Pertains to Bid Options #7 and #15 only.

F19 <u>Description</u>: Custom or Custom modified exterior wall surface

mounted single lamp compact fluorescent sconce, nominal  $6'-0"H \times 12"$  projection. Cast aluminum sandblasted body painted to match wrought iron, acrylic internal diffuser, custom lamp and diffuser shield consisting of aluminum arms, decorative grills, sandblasted art glass diffuser and integral 0 degree

electronic ballast. Wet label.

Manufacturers: Baldinger

Hess Rambusch Crenshaw

Mounting Type:

Remarks:

Exterior Wall Condition.

1. Manufactures shall price option 1-complete custom and option 2-modified standard with custom components.

2. Basis of design: Hess "Riva". Refer to fixture cut sheet and drawing E722 for more detailed information regarding the fixture's overall dimensions,

- components, finishes and Custom modified vs. Custom options.
- 3. Fixtures shall be design build and will continue to develop through the shop drawing process.
- 4. Fixtures to have U.L. Label
- 5. Manufacture to guarantee all metals shall not sag, warp or easily dent. All metals to maintain a straight profile/edge after installation
- 6. All exposed joints to be fully welded and ground smooth with no visible seams.
- 7. All exposed metals to be finished in a faux wrought iron finish (To be reviewed and approved as part of the fabrication process).
- 8. Art glass, acrylics and diffusers to be selected (To be reviewed and approved as part of the fabrication process).
- 9. Manufacturer to provide shop drawings for fixture, to include all dimensions, materials and lamping.
- 10. Following the approval of shop drawings the owner, architect and lighting designer will review elements of the lighting fixtures as fabrication proceeds including: metal finish diffuser finish, component details (i.e. rosette, finial and canopy). This review is intended to occur at the factory and provide the owner and design team an opportunity to view and approve specific detail elements of the fixture. This process is not intended to delay release for fixture fabrication but allow the owner an opportunity to engage and participate in the fabrication process. All scheduling implication should be clearly noted as the process develops.
- 11. Lighting Designer, Architect and Client will make trips to the factory to review and comment on fixture several times through out the manufacturing process.
- 12. Contractor to coordinate mounting wall construction details. Fixture canopy to sit flush with wall without any visible gap.
- 13. Manufacturer to provide suggested mounting details and overall fixture weight. Contractor to coordinate and verify that wall structure and support will be adequate to support fixture.

Location: Exterior Entrances

Supply:

Lamp:

277V

(1) PL-T 26W/835/4P/ALTO, (Philips)

F20 Description: Not Used

4'-0" dia. Custom pendant with compact fluorescent F21D Description:

lamping, machined and cast aluminum housing with twisted metal banding, (4) mounting stems and canopy in a wrought iron simulated finish, art glass diffusers with an opal acrylic internal diffuser, and

integral Hi-Lume dimming ballast(s)

Manufacturers: Baldinger

Rambusch Crenshaw

Mounting Type:

Remarks:

- 1. Refer to drawing E723 for more detailed information regarding the fixture's overall dimensions, components, and finishes.
- 2. Fixtures shall be design build and will continue to develop through the shop drawing process.
- 3. Fixtures to have U.L. Label
- 4. Manufacture to guarantee all metals shall not sag, warp or easily dent. All metals to maintain a straight profile/edge after installation
- 5. All exposed joints to be fully welded and ground smooth with no visible seams.
- 6. All exposed metals to be finished in a faux wrought iron finish (To be reviewed and approved as part of the fabrication process).
- 7. Art glass, acrylics and diffusers to be selected (To be reviewed and approved as part of the fabrication process).
- 8. Manufacturer to provide shop drawings for fixture, to include all dimensions, materials and lamping.
- 9. Following the approval of shop drawings the owner, architect and lighting designer will review elements of the lighting fixtures as fabrication proceeds including: metal finish diffuser finish, component details (i.e. rosette, finial and canopy). This review is intended to occur at the factory and provide the owner and design team an opportunity to view and approve specific detail elements of the fixture. This process is not intended to delay release for fixture fabrication but allow the owner an opportunity to engage and participate in the fabrication process. All scheduling implication should be clearly noted as the process develops.
- 10.Lighting Designer, Architect and Client will make trips to the factory to review and comment on fixture several times through out the manufacturing process.
- 11. Contractor to coordinate mounting ceiling details. Fixture canopy to sit flush with ceiling without any visible gap.
- 12. Manufacturer to provide suggested mounting details and overall fixture weight. Contractor to coordinate and verify that ceiling structure and support will be adequate to support fixture.

  120V

Supply: Location:

West Point Room

Lamp:

(4) PL-L 40W/835/RS/IS, Philips

F21A <u>Description</u>:

Similar to fixture type F21D, except with electronic

ballast(s)
Paldinger

Manufacturers:

Baldinger Rambusch Crenshaw

Mounting Type:
Remarks:

- Refer to drawing E724 for more detailed information regarding the fixture's overall dimensions, components, and finishes.
- 2. Fixtures shall be design build and will continue to develop through the shop drawing process.
- 3. Fixtures to have U.L. Label

- 4. Manufacture to guarantee all metals shall not sag, warp or easily dent. All metals to maintain a straight profile/edge after installation
- 5. All exposed joints to be fully welded and ground smooth with no visible seams.
- 6. All exposed metals to be finished in a faux wrought iron finish (To be reviewed and approved as part of the fabrication process).
- 7. Art glass, acrylics and diffusers to be selected (To be reviewed and approved as part of the fabrication process).
- 8. Manufacturer to provide shop drawings for fixture, to include all dimensions, materials and lamping.
- 9. Following the approval of shop drawings the owner, architect and lighting designer will review elements of the lighting fixtures as fabrication proceeds including: metal finish diffuser finish, component details (i.e. rosette, finial and canopy). This review is intended to occur at the factory and provide the owner and design team an opportunity to view and approve specific detail elements of the fixture. This process is not intended to delay release for fixture fabrication but allow the owner an opportunity to engage and participate in the fabrication process. All scheduling implication should be clearly noted as the process develops.
- 10.Lighting Designer, Architect and Client will make trips to the factory to review and comment on fixture several times through out the manufacturing process.
- 11. Contractor to coordinate mounting with ceiling details. Fixture canopy to sit flush with ceiling without any visible gap.
- 12. Manufacturer to provide suggested mounting details and overall fixture weight. Contractor to coordinate and verify that ceiling structure and support will be adequate to support fixture.

Supply: Location:

West Point Entry

(4) PL-L 40W/835/RS/IS, Philips

F21B Description:

Lamp:

Similar to fixture type F21A, except overall height,

surface mounting, and lamping

Manufacturers:

Baldinger Rambusch Crenshaw

120V

Mounting Type:
Remarks:

- 13. Refer to drawing E725 for more detailed information regarding the fixture's overall dimensions, components, and finishes.
- 14. Fixtures shall be design build and will continue to develop through the shop drawing process.
- 15. Fixtures to have U.L. Label
- 16. Manufacture to guarantee all metals shall not sag, warp or easily dent. All metals to maintain a straight profile/edge after installation
- 17.All exposed joints to be fully welded and ground smooth with no visible seams.

- 18.All exposed metals to be finished in a faux wrought iron finish (To be reviewed and approved as part of the fabrication process).
- 19.Art glass, acrylics and diffusers to be selected (To be reviewed and approved as part of the fabrication process).
- 20. Manufacturer to provide shop drawings for fixture, to include all dimensions, materials and lamping.
- 21. Following the approval of shop drawings the owner, architect and lighting designer will review elements of the lighting fixtures as fabrication proceeds including: metal finish diffuser finish, component details (i.e. rosette, finial and canopy). This review is intended to occur at the factory and provide the owner and design team an opportunity to view and approve specific detail elements of the fixture. This process is not intended to delay release for fixture fabrication but allow the owner an opportunity to engage and participate in the fabrication process. All scheduling implication should be clearly noted as the process develops.
- 22.Lighting Designer, Architect and Client will make trips to the factory to review and comment on fixture several times through out the manufacturing process.
- 23. Contractor to coordinate mounting with ceiling details. Fixture canopy to sit flush with ceiling without any visible gap.
- 24. Manufacturer to provide suggested mounting details and overall fixture weight. Contractor to coordinate and verify that ceiling structure and support will be adequate to support fixture.

Supply: 120V

Location: West Point Entry

Lamp: (3) PL-L 40W/835/RS/IS, Philips

F22 Description: Recessed incandescent low voltage lensed wall washer

nominal 4" diameter white face plate with 2" open aperture, frosted glass lens and 3 % D x 15" W x 9 % "

L, housing with integral electronic transformer.

Manufacturers: USA Illumination, Inc., # 7999-10 / 325NC-277V RSA, # ACT-2085-WH-Frosted Lens/ACT950-277V

Mounting Type: Gypsum Board Ceiling and Acoustical Ceilings.

Contractor to verify.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixtures to fit flush with ceiling plane

with no visible gaps

Location: Various Areas

Supply: 277/12V

Lamp:
(1) 50mr16/IR/WF60, (OSRAM SYLVANIA)

F22D <u>Description</u>: Same as fixture type "F22", except for voltage. <u>Manufacturers</u>: USA Illumination, Inc., # 7999-10 / 325NC-120V

RSA, # ACT-2085-WH-Frosted Lens/ACT950-120V

Mounting Type: Gypsum Board Ceiling and Acoustical Ceilings.

Contractor to verify.

Contractor to verify and coordinate fixture trim with Remarks:

ceiling details, refer to architectural plans and details. Fixtures to fit flush with ceiling plane

with no visible gaps

Location: Various Areas

Supply: 120/12V

(1) 50mr16/IR/WF60, (OSRAM SYLVANIA) Lamp:

F23D Description: Fully recessed nominal 1'W x 4'L x 5"H two lamp T8

> fluorescent two lamp direct/indirect troffer with 20ga. housing and 24ga. die formed smooth reflector in baked white enamel (88%), and perforated lamp basket (34% open) in white enamel finish with (.020") white acrylic inlay and integral Hi Lume dimming ballast.

Manufacturers: Zumtobel, #RCT(mod)1x4-232-PW-120-Hi Lume

Neoray, # 7-642-T8-120-Hi Lume-EM

Remarks: Fixtures must be able to run continuous end to end.

> Contractor and Architect to verify and coordinate all mounting details including fixture trim, fixture dimensions, etc. Fixture trim to sit flush with

ceiling plane.

Conference and AV rooms Location:

120V volts Supply:

(2) F32T8/ADV835/ALTO, (Philips) Lamp:

Cable mounted 1'-0"x 4'-0" linear fluorescent direct/indirect pendant with die formed and welded F24 Description:

cold rolled steel housing, semi-specular parabolic louver, white baked enamel finish and integral

electronic ballast.

Army Corps of Engineers, Type PF2 Manufacturers:

Mounting Type: Suspended Ceiling System.

Contractor is to coordinate fixture lengths with Remarks: architectural drawings for continuous run conditions.

Provide all necessary hardware for a complete working Contractor to verify and coordinate fixture trim with ceiling details and mounting heights, refer to architectural plans and details. Fixture canopies to fit flush with ceiling plane with no visible gaps.

Archives, Stacks and Offices Location:

Supply: 277V

(2) F32T8/ADV835/ALTO, (Philips) Lamp:

Bid Notes: Provide shop drawings for review and approval of all

row lengths and power feed conditions.

F25 Description: Surface mounted 1'-1"Ø compact fluorescent downlight

with cross baffle.

Army Corps of Engineers, Type SF2/F26DTT/RSManufacturers:

Mounting Type: Gypsum Board Ceiling.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and Fixtures to fit flush with ceiling plane details.

with no visible gaps.

Location: Archive Stacks

Supply: 277V

Lamp: (2) PL-C 26W/835/ALTO, (Philips)

F25EM Description: Same as F25, but with emergency ballast.

Manufacturers: Army Corps of Engineers, Type SF2/F26DTT/RS

Mounting Type: Gypsum Board Ceiling.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixtures to fit flush with ceiling plane

with no visible gaps.

Location: Archive Stacks

Supply: 277V

Lamp: (2) PL-C 26W/835/ALTO, (Philips)

F26 Description: Pendant mounted 1'-4"Ø compact fluorescent downlight

with wire guard.

Manufacturers: Army Corps of Engineers, Type PF12-wire guard-white

Mounting Type: Gypsum Board Ceiling System.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details and fixture mounting height, refer to

architectural plans and details.

Location: Archive Stacks

Supply: 277V

Lamp: (1) PL-C 26W/835/ALTO, (Philips)

F26EM Description: Same as F26, except with emergency ballast.

Manufacturers: Army Corps of Engineers, Type PF12-wire guard-white-EM

Mounting Type: Gypsum Board Ceiling System.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details and fixture mounting height, refer to

architectural plans and details.

<u>Location</u>: Archive Stacks

Supply: 277V

Lamp: (1) PL-C 26W/835/ALTO, (Philips)

F27 Description: Recess mounted 6 "Ø single lamp compact fluorescent

downlight with a semi-specular self-flanged reflector cone, nominal 6"  $\emptyset$  x 12  $\frac{1}{4}$ "H galvanized steel housing

and integral electronic ballast.

Manufacturers: Army Corps of Engineers, Type RF2

Mounting Type: Gypsum Board Ceiling and Acoustical Ceilings.

Contractor to verify.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixtures to fit flush with ceiling plane

with no visible gaps.

Location: Office Corridors

Supply: 277V

Lamp: (1) PLT-32/835/4P/ALTO, (Philips)

F27A Description: Same as F27, except with a damp label

Manufacturers: Army Corps of Engineers, Type RF2-damp label

Mounting Type: Gypsum Board Ceiling and Acoustical Ceilings.

Contractor to verify.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixtures to fit flush with ceiling plane

with no visible gaps.

Location: Shower Supply: 277V

Lamp: (1) PLT-32/835/4P/ALTO, (Philips)

F27EM Description: Same as F27, except with emergency ballast.

Manufacturers: Army Corps of Engineers, Type RF2-EM

Mounting Type: Gypsum Board Ceiling and Acoustical Ceilings.

Contractor to verify.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixtures to fit flush with ceiling plane

with no visible gaps.

Location: Archive Building

Supply: 277V

<u>Lamp</u>: (1) PLT-32/835/4P/ALTO, (Philips)

F28 Description: Fully recessed two lamp compact fluorescent 2' x 2'

troffer with (2) white perforated metal lamp shields with acrylic overlay with matte white reflector. Recessed depth is 6-1/4", and fixture has integral

electronic HPF ballast.

Manufacturer: Zumtobel, # RCT-22-2405-P-W-277

Neoray # 202-2Bx-xx Ceiling-277v

Legion # 582-2BX40-EBX-277

National # AST22-240Bx-PFM-xxCeiling-277V

Mounting Type: Acoustical Ceiling.

Remarks: Contractor to verify and coordinate mounting details

and locations. Electrical Engineer to coordinate and verify voltage and electrical feed. Contractor to provide all necessary hardware and accessories for

proper installation.

Location: Copy Rooms, Open offices

Supply: 277V

Lamp: (2) PL-L40W/35/RS, (Philips)

F28EM Description: Same as Fixture type F28, except with an emergency

ballast

Manufacturer: Zumtobel, RCT-240bx-EM

Neoray # 202-2Bx-xx Ceiling-120v-EM

Legion # 582-2BX40-EBX-EM

National # AST22-240Bx-PFM-xxCeiling-120V-EM

Mounting Type: Acoustical Ceiling.

Remarks: Contractor to verify and coordinate mounting details

and locations. Electrical Engineer to coordinate and verify voltage and electrical feed. Contractor to provide all necessary hardware and accessories for

proper installation.

Location: Archive Building

Supply: 277V

Lamp: (2) PL-L40W/35/RS, (Philips)

F29 Description: Display illumination integral with display cases.

Manufacturers: See FFE package
Mounting Type: Millwork Conditions.

Remarks: EC to provide dedicated duplex outlet at each

location.

Location: Display Cases

Supply: 120V

Lamp: See FFE package

F30 Description: Fully recessed nominal 3"H x 10"W two lamp low voltage

MR16 incandescent multiple downlight with aluminum housing, aperture frame painted matte white, white flange finish, white painted gimbal rings, frosted

lens and integral magnetic step-down transformer.

Manufacturers: Zumtobel Staff, # RML10260-10260TWH-V2-WH-MR16LF

Lightolier, # PA2M1675-WL-277

RSA, # CO216S-WH-WH-50-YK/WH-MAG-277-LN21SP

Mounting Type: Acoustical Ceiling.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details. Fixtures to fit flush with ceiling

plane with no visible gaps.

Location: Conference Rooms and Office Areas

Supply: 277/12 volts

Lamp: (2) 50MR16/IR/WFL60/C, (Osram Sylvania)

F30D Description: Same as fixture type "F30", except 120/12v integral

transformer.

Manufacturers: Zumtobel Staff, RML10260-10260TWH-V2-WH-MR16LF

Lightolier, # PA2M1675-WL-120

RSA, # CO216S-WH-WH-50-YK/WH-MAG-120-LN21SP

Mounting Type: Gypsum Board Ceiling and Acoustical Ceilings

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details. Fixtures to fit flush with ceiling

plane with no visible gaps.

<u>Location</u>: Conference Rooms <u>Supply</u>: 120/12 volts

Lamp: (2) 50MR16/IR/WFL60/C, (Osram Sylvania)

F30A <u>Description</u>: Ceiling recessed single lamp compact fluorescent

downlight with nominal 7" dia. opal diffuser, nominal 21" dia. x 7.5" H parabolic reflector and housing,

integral ballast.

Manufacturers: Delray, # Saturn I 4700-2E-32W

Ardee, # AL132-277

<u>Remarks</u>: Contractor to verify and coordinate fixture trim with

ceiling details. Fixtures to fit flush with ceiling

plane with no visible gaps.

Location: Open Areas Supply: 277 volts

Lamp: (1) PLT-32/835/4P/ALTO, (Philips)

F30AD Description: Same as F30A, except with a 120V Lutron Hi-Lume

dimming ballast.

Manufacturers: Delray, # Saturn I 4700-2E-32W-Hi Lume Dimming

Ardee, # AL132-120-Hi Lume Dimming

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details. Fixtures to fit flush with ceiling

plane with no visible gaps.

<u>Location</u>: Conference Rooms

Supply: 120 volts

<u>Lamp</u>: (1) PLT-32/835/4P/ALTO, (Philips)

F31 Description: Not Used

F32 Description: Not Used

F33 <u>Description</u>: Wall surface mounted 4"0x 26"H fluorescent sconce with

a 4" projection, fluted glass diffuser with opal acrylic interior diffuser and integral electronic

ballast.

Manufacturers: Translite Sonoma, #PR3-FT-BS-FE17

Mounting Type: Wall Condition. Height to be determined

Remarks: Contractor to verify and coordinate fixture trim with wall details and mounting heights, refer to architectural plans and details. Fixtures to fit

flush with surface plane with no visible gaps.

Location: Fire Stairs

Supply: 277V

<u>Lamp:</u> (1) F17T8/TL835, (Philips)

F33EM Description: Similar to type F33 except with emergency ballast

Manufacturers: Translite Sonoma, #PR3-FT-BS-FE17-EM
Mounting Type: Wall Condition. Height to be determined

Remarks: Contractor to verify and coordinate fixture trim with

wall details and mounting heights, refer to architectural plans and details. Fixtures to fit

flush with surface plane with no visible gaps.

Location: Archive Building

Supply: 277V

Lamp: (1) F17T8/TL835, (Philips)

F34 <u>Description</u>: Pendant chain or surface mounted 1'-0"x 4'-0" linear

T8 fluorescent industrial strip fixture.

Manufacturers: Army Corps of Engineers, Type PF6

Mounting Type: Exposed Slab System.

Remarks: Contractor is to coordinate fixture lengths with

architectural drawings for continuous run conditions. Provide all necessary hardware for a complete working system. Contractor to verify and coordinate fixture trim with ceiling details and mounting heights, refer to architectural plans and details. Fixtures to fit

flush with ceiling plane with no visible gaps.

Location: Mechanical & Storage Areas

Supply: 277V

Lamp: (2) F32T8/ADV835/ALTO, (Philips)

Bid Notes: Provide shop drawings for review and approval of all

row lengths and power feed conditions.

F34EM Description: Similar to type F34 except, emergency ballast.

Manufacturers: Army Corps of Engineers, Type PF6-EM

Mounting Type: Exposed Slab System.

Remarks: Contractor is to coordinate fixture lengths with

architectural drawings for continuous run conditions. Provide all necessary hardware for a complete working system. Contractor to verify and coordinate fixture trim with ceiling details and mounting heights, refer to architectural plans and details. Fixtures to fit

flush with ceiling plane with no visible gaps.

Location: Archive Building

Supply: 277V

Lamp: (2) F32T8/ADV835/ALTO, (Philips)

Bid Notes: Provide shop drawings for review and approval of run

conditions and mounting details.

F35 Description: Not Used

F36 <u>Description</u>: Recessed incandescent low voltage retractable

downlight nominal 5" diameter white face plate with 2" open aperture, frosted glass lens and 3 %" D x 15" W x

9 %" L, housing with integral transformer.

Manufacturers: USA Illumination, Inc., # 71TW/8010-10-9143

RSA, # MLV3084/C500-277V/Forsted lens

Mounting Type: Gypsum Board Ceiling and Acoustical Ceilings.

Contractor to verify.

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixture trim shall fit flush with ceiling

plane with no visible gaps

Location: Stairs
Supply: 277/12V

Lamp: (2) 50MR16/IR/WFL60/C, (Osram Sylvania)

F37 <u>Description</u>: Surface mounted compact fluorescent accent light,

nominal 10.3" W x 5.4" D, brass housing with guard and top cover, internally ice etched glass diffuser,

integral ballast.

Manufacturers: Prisma, # Clipper Visa-26CF-277V

Bega, # 2989P-277V-Brass Finishes

Mounting Type: Masonry Wall

Contractor to verify.

Remarks: Contractor to verify and coordinate fixture trim with

wall details and mounting heights, refer to architectural plans and details. Fixture trim to fit

flush with wall plane with no visible gaps

<u>Location</u>: Roof Entry

Supply: 277V

Lamp: (1) PL-C 26W/835/ALTO, (Philips)

F38 Description: Wet location recessed metal halide open downlight

nominal 5" diameter stainless steel trim, 15" L x 8" H

housing with integral ballast.

Manufacturers: Bega, # 6940MH/541MH-277V

Mounting Type: Masonry ceiling

Contractor to verify.

Contractor to verify and coordinate fixture trim with Remarks:

ceiling details and mounting heights, refer to architectural plans and details. Fixture trim to fit

flush with ceiling plane with no visible gaps

Location: Exterior Canopy

277V Supply:

(1) CDM35/PAR20/M/FL, (Philips) Lamp:

F39 Fully recess single lamp PAR 38 downlight, with 6" Description:

dia. spun aluminum housing, semi- specular Alzak

reflector and 11" x 14" x 10"H steel housing.

Kurt Versen, # C7302-SC Manufacturers: Mounting Type: Acoustical ceiling Contractor to verify.

Remarks: Contractor to verify and coordinate fixture trim with

> ceiling details and mounting heights, refer to architectural plans and details. Fixtures to fit

flush with ceiling plane with no visible gaps

Library Stack 2 Story Reading Areas Location:

Supply: 120V

(1) 90PAR38/HAL/FL28/LL, (Philips) Lamp:

F40 Description: Pendant cable mounted 11.5" Ø x 13.5" H compact

> fluorescent downlight with glass diffuser & 6.5" H mounting canopy/ballast compartment and integral

electronic ballast.

Delray, # 2382/W/O/32/2/E Manufacturers:

Prisma, # Optalum 28FL-Frosted-32CF-277V

Gypsum Board Ceiling and Acoustical Mounting Type: Ceilings.

Contractor to verify.

Contractor to verify and coordinate fixture trim with Remarks:

ceiling details and mounting heights, refer to architectural plans and details. Fixtures to fit

flush with ceiling plane with no visible gaps.

Location: Library Stacks and Office Suite Reception Areas

Supply: 277V

Lamp: (1) PL-T 32W/835/ALTO, (Philips)

Same as F40, except different mounting lengths and F40A Description:

conditions

Manufacturers: Delray, # 2382/W/O/32/2/E

Prisma, # Optalum 28FL-Frosted-32CF-277V

Gypsum Board Ceiling and Acoustical Ceilings. Mounting Type:

Contractor to verify.

Contractor to verify and coordinate fixture trim with Remarks:

ceiling details and mounting heights, refer to architectural plans and details. Fixtures to fit

flush with ceiling plane with no visible gaps.

Rotunda Stair Location:

277V Supply:

(1) PL-T 32W/835/ALTO, (Philips) Lamp:

F40B Description: Same as F40, except different mounting location and

bid conditions.

Manufacturers: Delray, # 2382/W/O/32/2/E

Prisma, # Optalum 28FL-Frosted-32CF-277V

Mounting Type: Mounted to signage above Circulation/Reference desks.

Remarks: Contractor to verify and coordinate fixture trim with ceiling details and mounting heights, refer to architectural plans and details. Fixtures to fit

flush with ceiling plane with no visible gaps.

Location: Circulation and Reference desks.

Supply: 277V

Lamp: (1) PL-T 32W/835/ALTO, (Philips)
Bid Notes: Pertains to Bid Option #5 only.

F41 Description: Recessed metal halide PAR30 downlight, nominal 6"  $\emptyset$ 

aperture, 14" L x 7" W x 10.5" H housing, softglow

clear cone, integral electronic ballast.

Manufacturers: Kurt Versen, # R7302/70PAR30L/SC/277V

Edison Price, # ARC38/6-70-277-EOL

Mounting Type: Gypsum Board Ceiling

Remarks: Contractor to verify and coordinate fixture trim with

ceiling details, refer to architectural plans and details. Fixture canopy to fit flush with ceiling

plane with no visible gaps

Location: Rotunda Stairs

Supply: 277V

Lamp:
(1) CDM70/PAR30L/M/FL, (Philips)

# F42 <u>Description</u>: Custom or Custom modified surface mounted single lamp

compact fluorescent bollard, nominal 3'H x 6" dia. Cast aluminum sandblasted body painted to match wrought iron, custom lamp and diffuser shield consisting of aluminum arms, decorative grills, sandblasted opal glass diffuser and integral

electronic ballast.

Manufacturers: Baldinger

Hess Rambusch Crenshaw

Mounting Type: Exterior Wall Condition.

Remarks:

1. Manufactures shall price option 1-complete custom and option 2-modified standard with custom components.

- Basis of design: Hess "Riva". Refer to fixture cut sheet and drawing E726 for more detailed information regarding the fixture's overall dimensions, components, finishes and Custom modified vs. Custom options.
- 3. Fixtures shall be design build and will continue to develop through the shop drawing process.
- 4. Fixtures to have U.L. Label
- 5. Manufacture to guarantee all metals shall not sag, warp or easily dent. All metals to maintain a straight profile/edge after installation
- 6. All exposed joints to be fully welded and ground smooth with no visible seams.
- 7. All exposed metals to be finished in a faux wrought iron finish (To be reviewed and approved as part of the fabrication process).

- 8. Art glass, acrylics and diffusers to be selected (To be reviewed and approved as part of the fabrication process).
- 9. Manufacturer to provide shop drawings for fixture, to include all dimensions, materials and lamping.
- 10. Following the approval of shop drawings the owner, architect and lighting designer will review elements of the lighting fixtures as fabrication proceeds including: metal finish diffuser finish, component details (i.e. rosette, finial and canopy). This review is intended to occur at the factory and provide the owner and design team an opportunity to view and approve specific detail elements of the fixture. This process is not intended to delay release for fixture fabrication but allow the owner an opportunity to engage and participate in the fabrication process. All scheduling implication should be clearly noted as the process develops.
- 11. Lighting Designer, Architect and Client will make trips to the factory to review and comment on fixture several times through out the manufacturing process.
- 12. Manufacture to provide mounting details to contractor Contractor to verify.

Mounting Type:

Pedestrian walkways Location:

Supply:

Lamp:

(1) PLT-26/835/4P/ALTO, (Philips)

F43D Description:

Recessed PAR30 lens wallwash, nominal 6 1/2" aperture, 19"L x 16"W x 10.5"H housing, softglow clear

cone and prismatic glass spread lens. Kurt Versen, # E7528/100PAR30/SC/120V

Manufacturers: Edison Price, # DLWL39/6.5-100-120-EOL

Mounting Type: Gypsum Board Ceiling

Remarks:

Contractor to verify and coordinate fixture trim with ceiling details, refer to architectural plans and details. Fixture canopy to fit flush with ceiling

plane with no visible gaps

Location: West Point Room

120V Supply:

(1) 100PAR30/CAP/IR/FL40, (Osram) Lamp:

F44 Description: Recessed incandescent low voltage adjustable accent light with nominal 4" diameter a retractable snoot with a 350° rotation and 90° vertical adjustment 2" open aperture, hex cell louver and 4" D x 15" W x 10" L, housing with integral electronic transformer.

USA Illumination, Inc., # 8011-8177/ 71TW-277V

Manufacturers: Board Ceiling Mounting Type: Gypsum and Acoustical Ceilings.

Contractor to verify.

Remarks:

Contractor to verify and coordinate fixture trim with ceiling details, refer to architectural plans and details. Fixtures to fit flush with ceiling plane with no visible gaps. Fixture to be focused post installation to illuminate statue and/or Artwork.

Location: Lobby 277/12V Supply:

## THOMAS JEFFERSON HALL USMA WEST POINT, NEW YORK

Lamp:
Note:

1) 50mr16/IR/WF60, (OSRAM SYLVANIA)
This fixture added as part of Bid Amendment #2.

End of Fixture Schedule

## SECTION 16510 APPENDIX "A"

## MARGIN OF EXCELLENCE - ADDENDUM 3 - REVISED

## ARCHITECTURAL LIGHTING FIXTURE SCHEDULE

## Note:

1. Complete specification includes fixture schedule, fixture cuts and general fixture specification included in base building construction contract.

F20	Description:		Recessed machined stainless steel compact fluorescent
			step light. $12-3/8" \times 3-1/4" \times 4"D$ brass housing with stainless steel face plate with integral opal acrylic
			lens and integral 0° electronic ballast.
	Manufacturer:		Bega, #2032P- <b>120V</b>
			Belfer, #3510FPL-BHL-13- <b>120</b> -H
	Remarks:		
		1.	Fixtures to have U.L. Wet Label.
		2.	Contractor to coordinate mounting details with
			vertical metal post.
		3.	Manufacturer to provide shop drawings for fixture,
			which shall include all dimensions, materials, lamping
			and mounting condition. Contractor to coordinate
			mounting ceiling details. Fixture faceplate to sit
			flush with post without any visible gaps.
	Location:		Terrace
	Supply:		120v

(1) PL-C 13W/835 (Philips)

End of Fixture Schedule

Lamp: